

SERVICE MANUAL

MODEL

PFM-510A1WU

PFM-510A1WE

DEST.

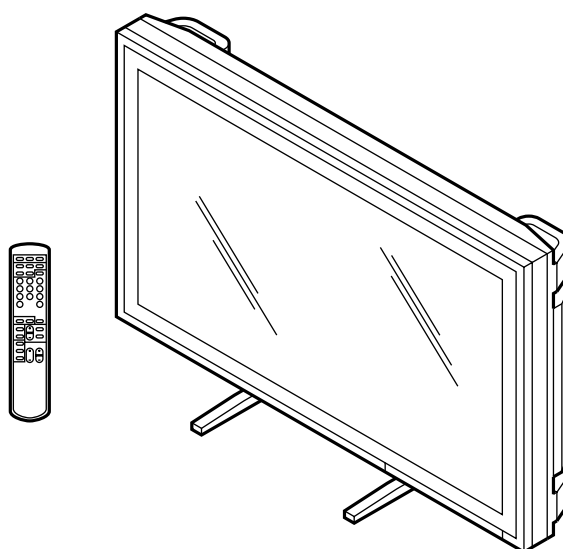
US/CND

AEP

MODEL

RM-921

MB-514



FLAT PANEL MONITOR

SONY[®]

WARNING

This manual is intended for qualified service personnel only.

To reduce the risk of electric shock, fire or injury, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so. Refer all servicing to qualified service personnel.

WARNUNG

Die Anleitung ist nur für qualifiziertes Fachpersonal bestimmt.

Alle Wartungsarbeiten dürfen nur von qualifiziertem Fachpersonal ausgeführt werden. Um die Gefahr eines elektrischen Schlages, Feuergefahr und Verletzungen zu vermeiden, sind bei Wartungsarbeiten strikt die Angaben in der Anleitung zu befolgen. Andere als die angegebenen Wartungsarbeiten dürfen nur von Personen ausgeführt werden, die eine spezielle Befähigung dazu besitzen.

AVERTISSEMENT

Ce manuel est destiné uniquement aux personnes compétentes en charge de l'entretien. Afin de réduire les risques de décharge électrique, d'incendie ou de blessure n'effectuer que les réparations indiquées dans le mode d'emploi à moins d'être qualifié pour en effectuer d'autres. Pour toute réparation faire appel à une personne compétente uniquement.

WARNING!!

AN INSULATED TRANSFORMER SHOULD BE USED DURING ANY SERVICE TO AVOID POSSIBLE SHOCK HAZARD, BECAUSE OF LIVE CHASSIS. THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.

SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY A  MARK ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION!!

AFIN D'ÉVITER TOUT RISQUE D'ÉLECTROCUTION PROVENANT D'UN CHÂSSIS SOUS TENSION, UN TRANSFORMATEUR D'ISOLEMENT DOIT ÊTRE UTILISÉ LORS DE TOUT DÉPANNAGE. LE CHÂSSIS DE CE RÉCEPTEUR EST DIRECTEMENT RACCORDÉ À L'ALIMENTATION SECTEUR.

ATTENTION AUX COMPOSANTS RELATIFS À LA SÉCURITÉ!!

LES COMPOSANTS IDENTIFIÉS PAR UNE MAPQUE  SUR LES SCHÉMAS DE PRINCIPE, LES VUES EXPLOSÉES ET LES LISTES DE PIÈCES SONT D'UNE IMPORTANCE CRITIQUE POUR LA SÉCURITÉ DU FONCTIONNEMENT. NE LES REMPLACER QUE PAR DES COMPOSANTS SONY DONT LE NUMÉRO DE PIÈCE EST INDIQUÉ DANS LE PRÉSENT MANUEL OU DANS DES SUPPLÉMENTS PUBLIÉS PAR SONY.

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Section 1

Operating Instructions

This section is extracted
from operation manual.

1-1. PFM-510A1WU/510A1WE Operating Instructions

3-867-473-01 (1)

SONY®

Flat Panel Monitor

Operating Instructions _____	GB
Mode d'emploi _____	FR
Bedienungsanleitung _____	DE
Manual de instrucciones _____	ES
Istruzioni per l'uso _____	IT
取扱説明書 _____	JP

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警告

電気製品は安全のための注意事項を守らないと、
火災や人身事故になることがあります。

この取扱説明書には、事故を防ぐための重要な注意事項と製品の取り扱い方を示しています。この取扱説明書をよくお読みのうえ、製品を安全にお使いください。お読みになったあとは、いつでも見られるところに必ず保管してください。

PFM-510A1WU
PFM-510A1WE
PFM-510A1WJ

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Sony Corporation Printed in Japan

WARNING

Owner’s Record

The model and serial numbers are located on the rear.
Record the model and serial numbers in the spaces provided below. Refer to these numbers whenever you call upon your Sony dealer regarding this product.

Model No. _____ Serial No. _____

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

For the customers in the U.S.A.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

For the customers in Canada

This class A digital apparatus complies with Canadian ICES-003.

For the customers in Europe

This is a Class A product. In a domestic environment, this product may cause radio interference in which case the user may be required to take adequate measures.

For PFM-510A1WE users

THIS APPARATUS MUST BE EARTHED

IMPORTANT

The wires in this mains lead are coloured in accordance with the following code:

- Green-and-yellow : Earth
- Blue : Neutral
- Brown : Live

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug proceed as follows:
The wire which is coloured green-and-yellow must be connected to the terminal in the plug which is marked with the letter E or by the safety earth symbol ⚡ or coloured green or green-and-yellow.
The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.
The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.

Voor de klanten in Nederland



Bij dit produkt zijn batterijen geleverd.
Wanneer deze leeg zijn, moet u ze niet weggooien maar inleveren als KCA.

The socket-outlet should be installed near the equipment and be easily accessible.

Note

When you connect a computer to this monitor, attach the supplied ferrite cores. If you do not do this, this monitor will not conform to mandatory FCC/IC/CE (EN55022) standards.

Attaching the ferrite cores
Set the ferrite cores on the both ends of the AC power cord. Close the lid tightly until the clamps click.

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Precautions

On safety

- Operate the unit on 100 to 120 V AC or 220 to 240 V AC.
- The nameplate indicating operating voltage, power consumption, etc. is located on the rear.
- Should any solid object or liquid fall into the cabinet, unplug the unit and have it checked by qualified personnel before operating it any further.
- Unplug the unit from the wall outlet if it is not to be used for several days or more.
- To disconnect the AC power cord, pull it out by grasping the plug. Never pull the cord itself.
- When the unit is installed on the floor, be sure to use the retractable feet.

On installation

- Allow adequate air circulation to prevent internal heat build-up. Do not place the unit on surfaces (rugs, blankets, etc.) or near materials (curtains, draperies) that may block the ventilation holes.
- Do not install the unit in a location near heat sources such as radiators or air ducts, or in a place subject to direct sunlight, excessive dust, mechanical vibration or shock.
- When you install multiple equipment with the unit, the following, such as Remote Commander's malfunction, noisy picture, noisy sound, may occur depending on the position of the unit and other equipment.

On PDP (Plasma Display Panel)

- There may be some tiny black points and/or bright points on the PDP. These points are normal.
- Do not display a same still image on the screen for long, consecutive time. Otherwise, the afterimage may appear on a part of a panel. Use the screen saver eventually to equalize the screen display.

On cleaning

To keep the unit looking brand-new, periodically clean it with a mild detergent solution. Never use strong solvents such as thinner or benzine, or abrasive cleansers since these will damage the cabinet. As a safety precaution, unplug the unit before cleaning it.

On repacking

Do not throw away the carton and packing materials. They make an ideal container in which to transport the unit. When shipping the unit to another location, repack it as illustrated on the carton.

If you have any questions about this unit, contact your authorized Sony dealer.

Features

The PFM-510A1W series are 16:9 42-inch flat panel monitor adopting the PDP (Plasma Display Panel) and accepts various types of signals with the built-in scan converter.

Improved image quality

The PDP achieves higher image quality with 1024 × 1024 lines. This makes for finely-detailed HDTV and PC images. You can get greater brightness and contrast over conventional monitors.

Internal high-performance scan converter

The monitor has a high performance scan converter. Using a unique algorithm, the monitor processes signals in a wide range of formats – Video, HDTV, PC, etc.

Flexibility

An option slot is in place for future expansion. The slot-in option adapter allows for quick and easy system upgrades.

Other features

- Three sets of video inputs with audio inputs: one composite video or Y/C inputs, one RGB input, and one RGB/component input.
- Displays the HDTV signal with tri-level sync signal.
- Three dimensional comb filter for NTSC Y/C separation.
- Line correlation comb filter for PAL Y/C separation.
- Automatic input signal detection with indication.
- Windows95/98¹⁾ PnP (Plug and Play) compatible.
- Picture AGC function — this function automatically adjusts and improves the contrast when a low intensity signal is input.
- On-screen menu for various adjustments and settings
- On-screen display in five languages for user-friendly access.
- Fine adjustment of image size and position
- Memory function for storage of up to five picture settings.
- ID control
- Self-diagnosis function.
- Remote (RS-232C) connector (mini DIN 8-pin)
- Control-S connector
- Accepts infrared or wired Sony Remote Commanders using SIRCS code.
- Vertical setup

Warning on power connection

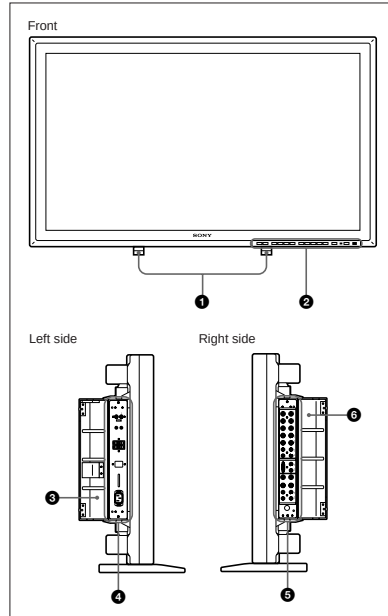
Use a proper power cord for your local power supply.

	United States, Canada	Continental Europe	United Kingdom, Ireland, Australia, New Zealand	Japan
Plug type	VM0033B	COX-07 636	—	VM1296
Female end	VM0113	COX-02 VM0310B	VM0303B	VM1313
Cord type	SJT	H05VV-F	CEE (13) 53rd (O.C)	HVCTF
Minimum cord set rating	13A/125V	10A/250V	10A/250V	10A/125V
Safety approval	UL/CSA	VDE	VDE	DENTORI

1) Windows95/98 is a registered trademark of the Microsoft Corporation.

Location and Function of Parts and Controls

Front / Sides



1 Retractable feet

Use for setting the monitor on the floor.
For details on using the retractable feet, see "Using the Retractable Feet" on page 12 (GB).

2 Control panel

For details on the control panel, see "Control Panel" on page 7 (GB).

3 Left panel cover

Open it when using the left connector panel.
You can install the Remote Commander in the back of this cover.

For details on opening the panel cover, see the right on this page.

4 Left connector panel

For details on the left connector panel, see "Left Connector Panel" on page 10 (GB).

6 (GB)

5 Right connector panel

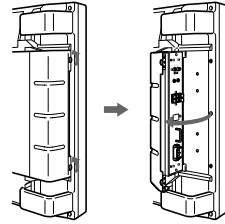
For details on the right connector panel, see "Right Connector Panel" on page 8 (GB).

6 Right panel cover

Open it when using the right connector panel.
For details on opening the panel cover, see the below on this page.

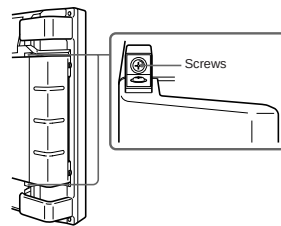
To open the panel cover

Loosen the screws counterclockwise and open the cover.



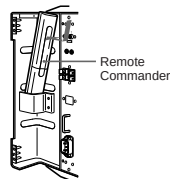
To take off the panel cover

Loosen the screws as illustrated below and take off the panel cover.



To install the Remote Commander in the panel cover

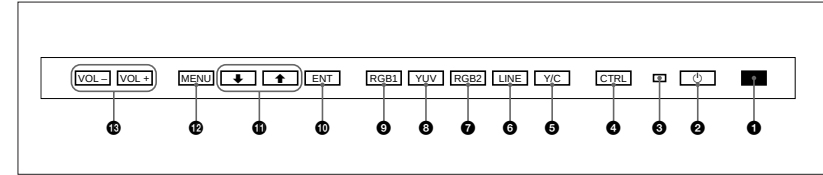
Install the Remote Commander in the back of the left panel cover as illustrated below.



Note

When housing the Remote Commander, make sure that the top of the Remote Commander faces upward and rear faces outside.

Control Panel



1 Remote control detector

Receives the beam from the Remote Commander.

2 ⏻ (standby) switch/⏻ (standby) indicator

Press to turn the monitor on. Press again to go back to the standby mode.
The ⏻ (standby) indicator lights up in red in the standby mode.

When the ⏻ indicator flashes, see "Self-diagnosis Function" on page 26 (GB).

3 Power indicator

Lights up when the monitor is turned on.

4 CTRL (control) button

To operate the buttons on the control panel, first press this button. Then the buttons light up or flash that show they can be operated. Press again to deactivate them.

Note

The buttons (except for ⏻ (standby) switch 2) on the control panel do not function if you do not press the CTRL button first.

5 Y/C button

Select the signal input from the Y/C IN jack in the LINE connectors.

6 LINE button

Select the signal input from the VIDEO IN connector in the LINE connectors.

7 RGB2 button

Select the signal input from the RGB2 connectors.

8 YUV button

Select the component signal input from the RGB1 connectors.

9 RGB1 button

Select the RGB signal input from the RGB1 connectors.

10 ENT (enter) button

Press to select the desired item in a menu.

11 ⬆/⬆ buttons

Press to move the cursor (▶) to an item or to adjust value in a menu.

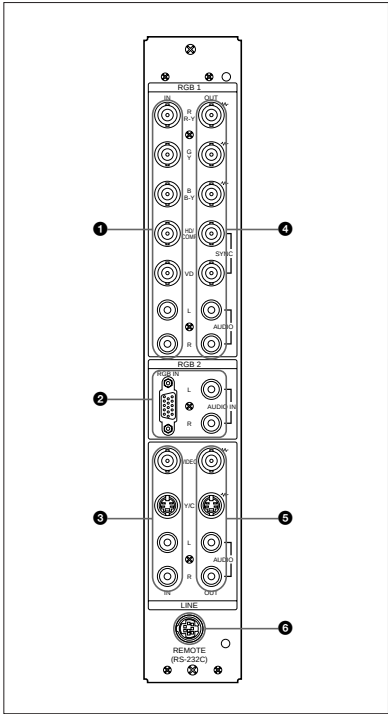
12 MENU button

Press to make the menu appear.

13 VOL (volume) +/- buttons

Press the + button to increase the volume, or the - button to decrease the volume.

Right Connector Panel



Note
The image enhancing process for video signals (NTSC, PAL) works only for composite (Y/C) or component (Y/R-Y/B-Y) input.
The image from the RGB input may looked blurred. This is normal.

- 1 RGB1 IN connectors**
R (R-Y)/G (Y)/B (B-Y) IN (BNC-type): Input the analog RGB signal or component signal. Connect to the RGB signal or component (Y/B-Y/R-Y) signal output of a computer or video equipment. This unit also accepts the HD analog component (Y/Pb/Pr) signal. Input the Pb signal to the B (B-Y) IN connector and Pr signal to the R (R-Y) IN connector.
- HD/COMP IN (BNC-type):** Input the H sync signal or composite sync signal. Connect to the H sync signal or composite sync signal output of a computer or video equipment.
- VD IN (BNC-type):** Input the V sync signal. Connect to the V sync signal output of a computer or video equipment.

External sync signal is selected automatically. See the priority chart below.

Input connector	Input sync signals		
HD/COMP IN	H Sync	Comp Sync	—
VD IN	V Sync	—	—
G(Y) IN	Sync on G	Sync on G	Sync on G
Sync signals to be selected	H Sync	Comp Sync	Sync on G

AUDIO IN (L/R) (phono type): Input the audio signal. Connect to the audio output of a computer or video equipment. Connect to the channel L when the audio signal is monaural.

- 2 RGB2 IN connectors**
RGB IN (D-sub 15-pin): Connect to the RGB signal output of a computer.
- AUDIO IN (L/R) (phono type):** Input the audio signal. Connect to the audio output of a computer. Connect to the channel L when the audio signal is monaural.
- 3 LINE IN connectors**
VIDEO IN (BNC-type): Connect to the composite video signal output of the video equipment.
- Y/C IN (Mini DIN 4-pin):** Connect to the Y/C signal output of the video equipment.
- AUDIO IN (L/R) (phono type):** Connect to the audio output of the video equipment. Connect to the channel L when the audio signal is monaural.

- 4 RGB1 OUT connectors**
These connectors are used as loop-through outputs of the RGB1 IN connectors **1**.
When the plug is connected to the RGB OUT connectors, the 75-ohms termination of the RGB IN connectors is released, and the signal input to the RGB IN connectors is output from the these connectors.
- R (R-Y)/G (Y)/B (B-Y) OUT (BNC-type):** Loop-through outputs of the RGB IN connectors. Connect to the RGB signal or component (Y/B-Y/R-Y) signal input of another monitor.
- HD/COMP OUT (BNC-type):** Loop-through output of the HD/COMP IN connector. Connect to the H sync signal or composite sync signal input of another monitor.
- VD OUT (BNC-type):** Loop-through output of the VD IN connector. Connect to the V sync signal input of another monitor.

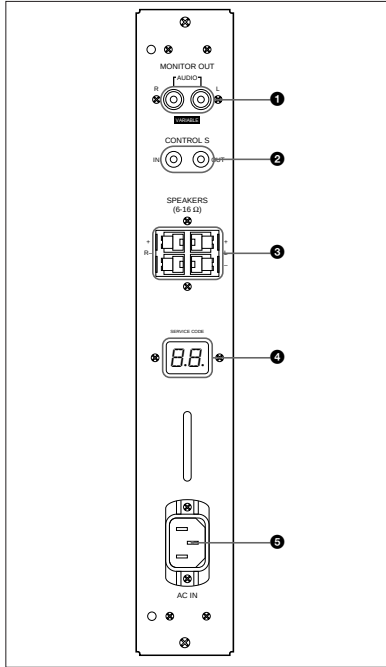
Note
The HD/COMP OUT and VD OUT connectors are high impedance outputs.
When using these outputs, connect a monitor with high impedance sync input connector, or the picture might be oscillated or disappeared because of the sync signal level mismatch.

AUDIO OUT (L/R) (phono type): Loop-through outputs of the AUDIO IN jacks. Connect to the audio inputs of another monitor.

- 5 LINE OUT connectors**
These connectors are used as loop-through outputs of the LINE IN connectors **3**.
When the plug is connected to the VIDEO OUT connector or Y/C OUT jack, the 75-ohms termination of the VIDEO IN connector or Y/C IN jack is released, and the signal input to the VIDEO IN or Y/C IN jack is output from the VIDEO OUT connector or Y/C OUT jack.
- VIDEO OUT (BNC-type):** Connect to the composite video signal input of another monitor or video equipment.
- Y/C OUT (Mini DIN 4-pin):** Connect to the Y/C signal input of another monitor or video equipment.
- AUDIO OUT (L/R) (phono type):** Loop-through outputs of the AUDIO IN jacks. Connect to the audio inputs of another monitor or video equipment.

- 6 REMOTE (RS-232C) connector (mini DIN 8-pin)**
This connector allows remote control of the monitor using the RS-232C protocol. For details, see your authorized Sony dealer.

Left Connector Panel

**1 MONITOR OUT AUDIO (L/R) jacks (phono type)**

Output the signal input from the AUDIO IN jacks. Connect to the audio inputs of an audio amplifier (not supplied).

Note

These jacks are variable outputs. Set the volume to maximum position to set the output level to 500 mVrms.

2 CONTROL S IN/OUT jacks (mini jacks)

Connect to the CONTROL S jacks of video equipment or another monitors. Then you can simultaneously control all equipment with a single Remote Commander.

To control equipment by aiming the supplied Remote Commander to the remote control detector of the monitor, connect the CONTROL S OUT jack of the monitor and the CONTROL S IN jack of other equipment.

10 (GB)

Notes

- If you connect the CONTROL S IN jack to the other equipment's CONTROL S OUT jack, you cannot operate the monitor with the Remote Commander.
- You can use the stereo cable with mini plug instead of the control S cable.

3 SPEAKERS L/R terminals

Connect to speakers with 6 to 16 ohms impedance.

Note

Do not connect the speaker's cord to the monitor and to an amplifier simultaneously, or an excessive electric current might flow from the amplifier and damage the monitor.

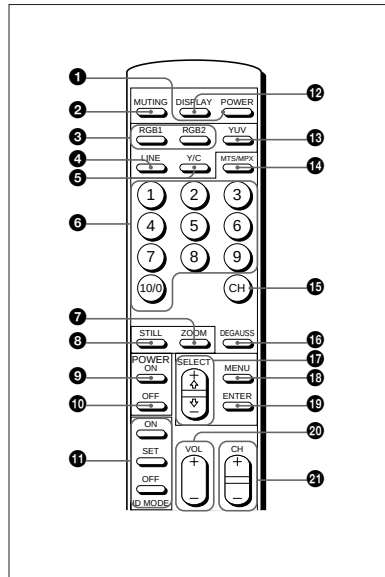
4 SERVICE CODE indicator

The indicator is only for qualified personnel.

5 ~AC IN socket

Connect the supplied AC power cord to this socket and to a wall outlet. Once you connect the AC power cord, the monitor turns to standby mode.

Remote Commander RM-921

**1 POWER switch**

Press to turn on the monitor. Press again to go back to the standby mode.

Note

When using multiple monitors, press this switch to turn monitors which are already on into the standby mode, or turn on monitors which are in the standby mode.

2 MUTING button

Press to mute the sound. Press this button again or press the VOL (volume) +/- button to obtain the sound again.

3 RGB1/RGB2 buttons

Select the signal input from the RGB1 or RGB2 connectors.

4 LINE button

Selects the signal input from the VIDEO IN connector in the LINE connectors.

5 Y/C button

Selects the signal input from the Y/C IN jack in the LINE connectors.

6 Number buttons

Press to select the index number.

7 ZOOM button

This button does not operate with the monitor.

8 STILL button

This button does not operate with the monitor.

9 POWER ON switch

Press to turn on the monitor. When you use multiple monitors, you can use this switch instead of the POWER switch 1 not to affect another monitor which is already turned on.

10 POWER OFF switch

Press to turn the monitor into the standby mode. When you use multiple monitors, you can use this switch instead of the POWER switch 1 not to affect another monitor which are in the standby mode.

11 ID MODE (ON/SET/OFF) buttons

Press the ON button to make an index number appear on the screen. Then press the index number of the monitor you want to operate and press the SET button. After you finish the operation, press the OFF button to return to the normal mode.

12 DISPLAY button

Displays the input signal information on the top of the monitor screen. Press again to clear it.

13 YUV button

Selects the component signal input from the RGB1 connectors.

14 MTS/MPX button

This button does not operate with the monitor.

15 CH button

This button does not operate with the monitor.

16 DEGAUSS button

This button does not operate with the monitor.

17 SELECT +↑/↓ buttons

Press to move the cursor (▶) to an item or to adjust value in a menu.

18 MENU button

Press to make the menu appear.

19 ENTER button

Press to select the desired item in a menu.

20 VOL +/- buttons

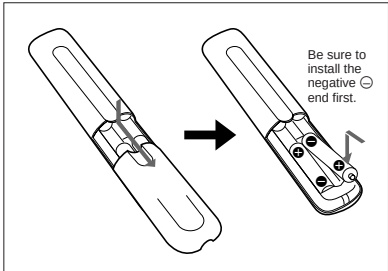
Press the + button to increase the volume, or the - button to decrease the volume.

21 CH +/- buttons

This button does not operate with the monitor.

Installing batteries

Insert two size AA (R6) batteries in correct polarity.



- In normal operation, batteries will last up to half a year. If the Remote Commander does not operate properly, the batteries might be exhausted. Replace them with new ones.
- To avoid damage from possible battery leakage, remove the batteries if you do not plan to use the Remote Commander for a fairly long time.

When the Remote Commander does not work

Check that the  indicator lights up. The Remote Commander operates the monitor only when the monitor is turned on, or it is in the standby mode.

Note

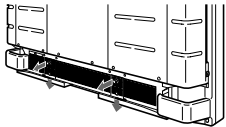
If you connect the cable to the CONTROL S IN jack on the side of the monitor, you cannot operate the monitor with the Remote Commander.

Installation

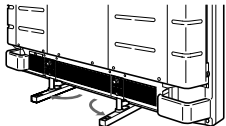
Using the Retractable Feet

This section describes the installation arrangements for installing the projector.

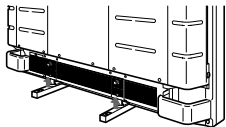
- 1 Pull out the knobs and pull down the retractable feet.



- 2 Turn the retractable feet outward.

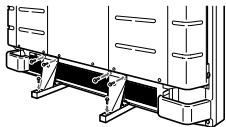


- 3 Push in the retractable feet and lock.



To fix the retractable feet

When the unit is installed on the floor, be sure to fix the retractable feet. Install the foot support brackets as illustrated below.

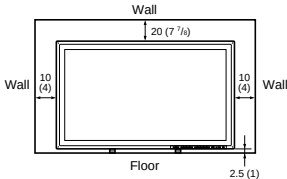


Caution

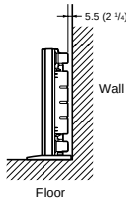
- When you install the monitor, make sure there is more space than that shown in the figure below.
- The ambient temperature must be 0°C – +35°C (32°F – 95°F).

When using the retractable feet

Front



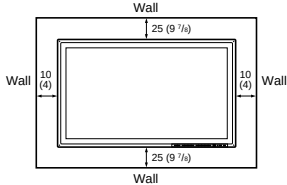
Side



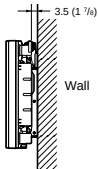
Units: cm (inches)

When using the mounting bracket

Front



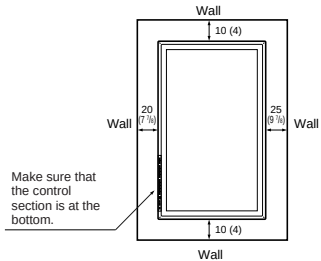
Side



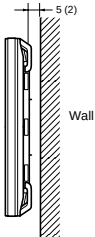
Units: cm (inches)

Hooked on the wall: Vertically

Front



Side

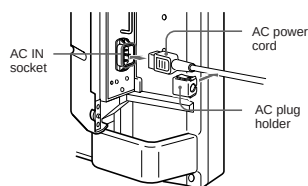


Units: cm (inches)

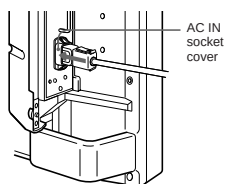
Connections

Connecting the AC Power Cord

- 1 Plug the power cord into the AC IN socket. Then, attach the AC plug holder (supplied) to the AC power cord.



- 2** Slide the AC plug holder over the cord until it connects to the AC IN socket cover.



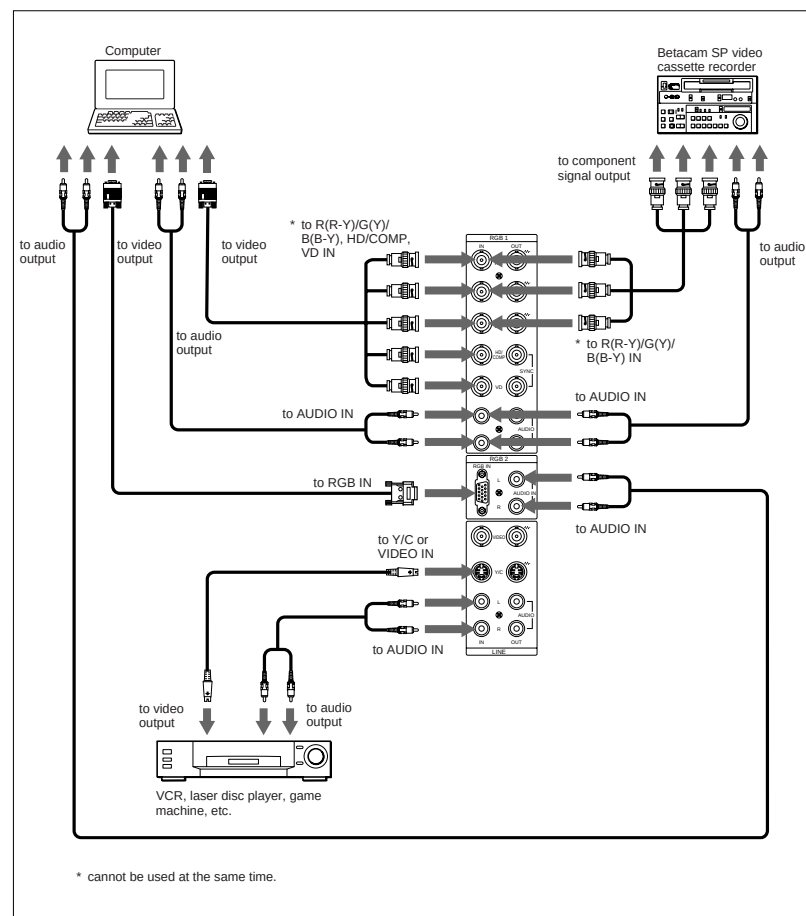
To remove the AC power cord

Squeeze the upper and lower sides and pull out the AC plug holder.

Connection Example

Before you get started

- First make sure that the power to each piece of equipment is turned off.
- Use connecting cables suitable for the equipment to be connected.
- The cable connectors should be fully inserted into the jacks. A loose connection may cause hum and other noise.
- To disconnect the cable, pull out by grasping the plug. Never pull the cable itself.
- Read the instruction manual of the equipment to be connected.

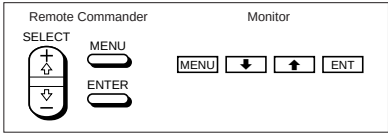


Using On-screen Menus

Operating Through Menus

Menu operating buttons

There are four buttons on the monitor and the Remote Commander for menu operations.

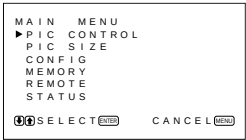


The buttons on the control panel are used for explanation purpose in this operating instructions. The ENTER button on the Remote Commander has the same function as the ENT button on the control panel and the SELECT + $\uparrow$ / $\downarrow$ buttons on the Remote Commander as same as the $\uparrow$ / $\downarrow$ buttons on the control panel.

Configuration of the menu

To select the language used in the menu, see page 26 (GB).

- 1 Press MENU.
The main menu appears on the monitor screen.



- 2 Press $\uparrow$ / $\downarrow$ to move the cursor ($\blacktriangleright$) and press ENT to select a menu.
The selected menu appears on the monitor screen.
- 3 Press $\uparrow$ / $\downarrow$ to move the cursor ($\blacktriangleright$) and press ENT to select an item.
The menu for the selected item appears on the monitor screen.

- 4 Press $\uparrow$ / $\downarrow$ to adjust or select the setting and press ENT to set.
The setting is registered and the menu returns to the previous menu.

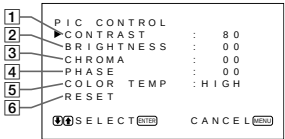
To return to the normal screen, press the MENU button repeatedly until the menu disappears.

Menu Guide

Note
“— — —” appears next to an item when its function is not available. The availability depends on the types of input signal.

PIC CONTROL menu

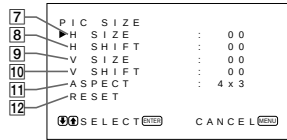
This menu is used for adjusting the picture.



- 1 **CONTRAST**
Press $\uparrow$ to increase the contrast and press $\downarrow$ to decrease it.
- 2 **BRIGHTNESS**
Press $\uparrow$ to make the picture brighter and press $\downarrow$ to make it darker.
- 3 **CHROMA**
Press $\uparrow$ to increase color saturation and press $\downarrow$ to decrease it.
- 4 **PHASE**
Press $\uparrow$ to make overall picture greenish and press $\downarrow$ to make it purplish.
- 5 **COLOR TEMP**
Select a color temperature from HIGH or LOW.
- 6 **RESET**
Select to restore the factory settings in the PIC CONTROL menu items [1] to [5].
For details on using the reset function, see “Restoring the PIC CONTROL Menu Items to Original Settings” on page 22 (GB).

PIC SIZE menu

This menu is used for positioning and resizing the picture.



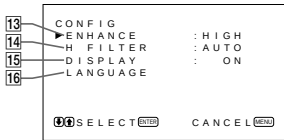
- 7 **H SIZE**
Adjusts the horizontal picture size. Press $\uparrow$ to enlarge the horizontal size and press $\downarrow$ to diminish it.
- 8 **H SHIFT**
Adjusts the horizontal centering. Press $\uparrow$ to move the picture to the right and press $\downarrow$ to move it to the left.
- 9 **V SIZE**
Adjusts the vertical picture size. Press $\uparrow$ to enlarge the vertical size and press $\downarrow$ to diminish it.
- 10 **V SHIFT**
Adjusts the vertical centering. Press $\uparrow$ to move the picture up and press $\downarrow$ to move it down.
- 11 **ASPECT**
Set the aspect ratio of the picture to 4:3 or 16:9.
- 12 **RESET**
Select to restore the factory settings in the PIC SIZE menu items [7] to [11].
For details on using the reset function, see “Restoring the Original Picture Size and Position” on page 24 (GB).
- Note**
When receiving DTV signals and changing the H/V SIZE or H/V SHIFT in the PIC SIZE menu, the system goes into the Offset Sampling Mode; the image may become blurred or horizontal lines may appear because the memory write phase is faster than the read phase. This is not a system malfunction. To avoid this problem, reset the H/V SIZE and the H/V SHIFT to the factory settings. If any problems persist with the factory setting, adjust the settings as shown below.
To adjust the setting, see “Restoring the original Picture Size and Position” (page 24 (GB)).

- DTV signals for factory setting:
1080/60i, 480/60i, 575/50i, 480/60p
- Other DTV signals and their recommended settings:

	H SIZE	V SIZE	H SHIFT	V SHIFT	ASPECT
1080/50i	+48	+11	+10	-02	16:9
1080/48i	MAX	+09	+12	-02	16:9
1152/50i	+33	-02	+20	0	16:9

CONFIG menu

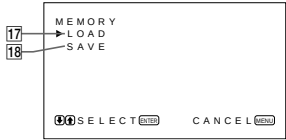
This menu is used for adjusting the signal or selecting the language.



- 13 **ENHANCE (Sharpness)**
You can change the outline correction level:
LOW: Default setting for VIDEO signal
HIGH: Default setting for computer signal
- 14 **H FILTER**
Select AUTO normally.
Select HIGH when the ringing appears on the screen. Select LOW when the moiré pattern or noise appears on the screen. The moiré pattern or noise decreases even the screen looks a little blurred.
- 15 **DISPLAY**
Select ON to display the input signal information for about five seconds on the top of the monitor screen when turning on the power or switching the input signal.
- 16 **LANGUAGE**
Select the on-screen language among five languages. Available languages are: English, German, French, Italian and Spanish.
For details on selecting the language, see “Selecting the On-screen Language” on page 26 (GB).

MEMORY menu

This menu is used for saving or recalling the settings in the PIC CONTROL, PIC SIZE and CONFIG (only for ENHANCE and H FILTER) menus.



For details, see “Using the Memory” on page 25 (GB).

17 LOAD

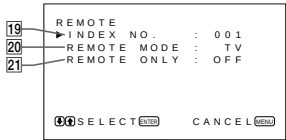
Recalls the preset settings.

18 SAVE

Saves the settings.

REMOTE menu

This menu is used for the remote control setting.



19 INDEX NO.

Sets the index number of the monitor.

Note

When you set the number, use the buttons on the monitor.

For details on the index number, see “Operating a Specific Monitor With the Remote Commander” on page 27 (GB).

20 REMOTE MODE

Select the Remote Commander mode.

TV: Sony monitors’ or TVs’ commander

PJ: Sony projectors’ commander

OFF: Disables the remote control.

For details, see “Using the Other Remote Commander” on page 28 (GB).

21 REMOTE ONLY

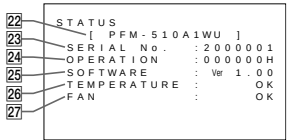
Select ON to disable the front control buttons on the monitor. The monitor can only be controlled with the Remote Commander. While REMOTE ONLY is ON, the indicators on the front panel go off.

To cancel the REMOTE ONLY mode, set REMOTE ONLY to OFF with the Remote Commander, or press the CTRL button while pressing the $\odot$ switch. The monitor turns to the standby mode and the REMOTE ONLY mode is canceled.

The setting in this item is still retained when the AC power cord is disconnected.

STATUS menu

This menu is used for displaying the internal condition of the monitor.



22 Model name

Indicates the model name.

23 SERIAL No.

Indicates the serial number.

24 OPERATION

Indicates the total operation hours.

Note

The standby mode is not counted as OPERATION time.

25 SOFTWARE

Indicates the system software version.

26 TEMPERATURE

Indicates whether the internal temperature of the monitor is usual.

OK: Usual

NG: Unusual

When the internal temperature is unusual, NG is displayed and the item flashes in red. The $\odot$ indicator on the control panel also flashes.

Note

The “TEMPERATURE NG” message may appear when the ventilation holes are blocked or the monitor is installed in a poorly ventilated area. In this case, check that the ventilation holes are not blocked and install the monitor in a good ventilated area. If the message still displayed, contact your authorized Sony dealer.

When the $\odot$ indicator flashes or NG indicates, see “Self-diagnosis Function” on page 26 (GB).

27 FAN

The cooling fans are built in this monitor. This item indicates whether the cooling fans work properly.

OK: Usual

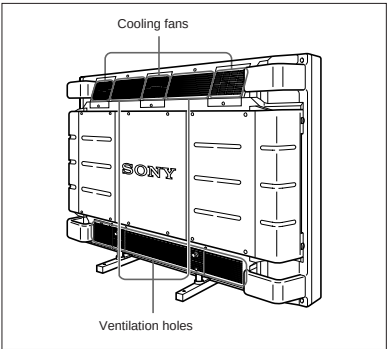
NG: Unusual

When the cooling fans are unusual, NG is displayed and the item flashes in red. The $\odot$ indicator on the control panel also flashes.

Note

When the “FAN NG” message appears, contact your authorized Sony dealer.

When the $\odot$ indicator flashes or NG indicates, see “Self-diagnosis Function” on page 26 (GB).



Note

The upper cooling fans detect the monitor’s internal temperature and control the fans rotations. If the ambient temperature is high, the number of fan rotations increase and the noise will be louder.

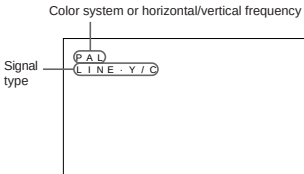
Watching the Picture

Before you start

- Turn on the monitor.
- Turn on the connected equipment and play a video source.
- To display the input signal information on the screen when turning on the power or switching the input signal, set “DISPLAY” in the CONFIG menu to ON.
- To select the on-screen language used in the menu, see page 26 (GB).

Switching the Picture

- 1** Press CTRL on the control panel of the monitor. RGB1, YUV, RGB2, LINE, and Y/C buttons light up.
- 2** Select the input source to be displayed by pressing the following buttons.
- RGB1:** Selects the audio and video signal input from the RGB1 connectors when the input signal is RGB signal.
- YUV:** Selects the audio and video signal input from the RGB1 connectors when the input signal is component signal.
- RGB2:** Selects the audio and video signal input from the RGB2 connectors.
- LINE:** Selects the audio and video signal input from the VIDEO IN connector and AUDIO IN jack in the LINE connectors.
- Y/C:** Selects the audio and video signal input from the Y/C IN connector and AUDIO IN jack in the LINE connectors.



The selected input signal appears on the monitor screen.

You can also switch the input signal from the Remote Commander.

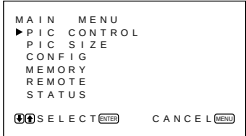
Note

We recommend the input source video equipment equipped with the TBC (time base corrector). If you receive the signal without the TBC, the picture may disappear due to disturbance of the sync signal.

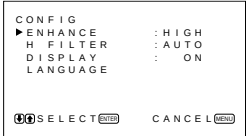
Input Signal and Monitor Status Information Display

Input signal and monitor status information is displayed on-screen for about five seconds when turning on the power or switching the input signal. To disable this function, follow the steps below.

- 1** Press MENU. The main menu appears on the monitor screen.



- 2** Press **↑/↓** to move the cursor (▶) to “CONFIG” and press ENT. The CONFIG menu appears on the monitor screen.



- 3** Press **↑/↓** to move the cursor (▶) to “DISPLAY” and press ENT. The following menu appears on the monitor screen.



Actual on-screen display of the monitor status

On-screen display	Significance
31.5kHz / 60Hz (eg.)	The selected input signal is computer RGB.
525 / 60 (eg.)	The selected input signal is RGB or component video.
NTSC	The selected input signal is NTSC.
PAL	The selected input signal is PAL.
OTHERS	The input signal is out of the capture range.
NO SYNC	There is no input signal.
MUTING	The sound is muted.
RGB1 RGB	The signal mode of RGB1 is set to RGB.
RGB1 YUV	The signal mode of RGB1 is set to component video.
LINE COMP	Composite video input is selected at LINE.
LINE Y/C	Y/C video input is selected at LINE.

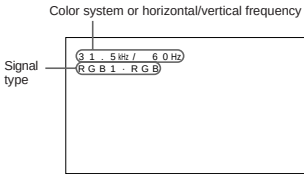
- 4** Press **↑** to set “DISPLAY” to OFF and press ENT. The DISPLAY function is disabled.

To activate the information function, set “DISPLAY” to ON at the step 4 above.

Note

You can display the input signal information anytime by pressing the DISPLAY button on the Remote Commander, regardless of the above setting.

The input signal information list



Input signal	Color system or horizontal/vertical frequency display	
NTSC	NTSC	
PAL	PAL	
VGA ^{a)} (Graphics)	31.5 kHz	60 Hz
VGA (Text)	31.5 kHz	70 Hz
HDTV	33.8 kHz	60 Hz
Mac ^{b)} 13"	35.0 kHz	67 Hz
VESA ^{c)} 800×600	37.9 kHz	60 Hz
VESA 1024×768	48.4 kHz	60 Hz
Mac 16"	49.7 kHz	75 Hz
ATI ^{d)} 1280×1024	64.0 kHz	60 Hz
Mac 21"	68.7 kHz	75 Hz
VESA 1280×1024	80.0 kHz	75 Hz

- a) VGA is a registered trademark of the International Business Machines Corporation, USA.
- b) Mac (Macintosh) is a registered trademark of Apple Computer, Inc.
- c) VESA is a registered trademark of Video Electronics Standard Association.
- d) ATI is a registered trademark of ATI Technologies, Inc.

Note

When inputting the HDTV signal, input the tri-level sync signal to the G/Y IN connector.

Adjusting the Picture

While watching the picture, you can adjust contrast, brightness, chroma, and phase to suit your taste. The adjustments can be carried out for each input signal separately. You can also store the adjusted levels in memory.

Adjusting the Contrast, Brightness, Chroma, and Phase

Press MENU so that the main menu appears on the monitor screen and select the “CONTRAST”, “BRIGHTNESS”, “CHROMA”, or “PHASE” from the PIC CONTROL menu with the $\uparrow/\downarrow$ buttons.

CONTRAST

Select the “CONTRAST” with the $\uparrow/\downarrow$ buttons and press the ENT button.
Adjust the contrast with the $\uparrow/\downarrow$ buttons in the range from MIN (0) to MAX (+100).
 $\uparrow$: to increase picture contrast
 $\downarrow$: to decrease picture contrast

BRIGHTNESS

Select the “BRIGHTNESS” with the $\uparrow/\downarrow$ buttons and press the ENT button.
Adjust the brightness with the $\uparrow/\downarrow$ buttons in the range from MIN (–50) to MAX (+50).
 $\uparrow$: to make overall picture greenish
 $\downarrow$: to make overall picture purplish

CHROMA

Select the “CHROMA” with the $\uparrow/\downarrow$ buttons and press the ENT button.
Adjust the chroma with the $\uparrow/\downarrow$ buttons in the range from MIN (–50) to MAX (+50).
 $\uparrow$: to increase color intensity
 $\downarrow$: to decrease color intensity

PHASE

Select the “PHASE” with the $\uparrow/\downarrow$ buttons and press the ENT button.
Adjust the phase with the $\uparrow/\downarrow$ buttons in the range from MIN (–50) to MAX (+50).
 $\uparrow$: to make overall picture greenish
 $\downarrow$: to make overall picture purplish

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Notes

- CHROMA and PHASE controls do not function with RGB signal.
- PHASE control does not function with component signal.
- PHASE control does not function with PAL color source.
- Do not change the CHROMA/PHASE (NTSC only) level when the selected signal is not NTSC or PAL. Although it gives no effect to the current picture, it does affect the picture of the NTSC or PAL signal which is input later.

Restoring the PIC CONTROL Menu Items to Original Settings

- 1 In the PIC CONTROL menu, Press $\uparrow/\downarrow$ to move the cursor (►) to “RESET” and press ENT. The following menu appears on the monitor screen.



- 2 Press $\uparrow/\downarrow$. “NO” changes to “YES”.



- 3 Press ENT. The PIC CONTROL menu items are restored.

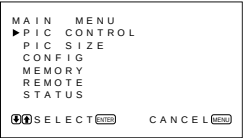
To cancel the reset function, press the MENU button before pressing the ENT button.

Resizing and Positioning the Picture

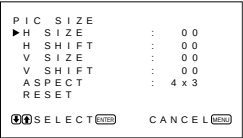
You can shift the position of the picture so that it fits in the screen, or adjust the vertical and horizontal size of the picture separately.

Resizing the Picture

- 1 Press MENU. The main menu appears on the monitor screen.



- 2 Press $\uparrow/\downarrow$ to move the cursor (►) to “PIC SIZE” and press ENT. The PIC SIZE menu appears on the monitor screen.

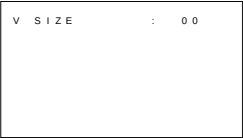


- 3 Press $\uparrow/\downarrow$ to move the cursor (►) to “H SIZE” and press ENT. The following menu appears on the monitor screen.



- 4 Press $\uparrow/\downarrow$ to resize the picture.
 $\uparrow$: to expand horizontal size
 $\downarrow$: to reduce horizontal size
The horizontal picture size is indicated on the monitor screen in the range from MIN(–50) to MAX(+50). The factory value is 00.

- 5 Press ENT. The menu returns to the PIC SIZE menu.
- 6 Press $\uparrow/\downarrow$ to move the cursor (►) to “V SIZE” and press ENT. The following menu appears on the monitor screen.



- 7 Press $\uparrow/\downarrow$ to resize the picture.
 $\uparrow$: to expand vertical size
 $\downarrow$: to reduce vertical size
The vertical picture size is indicated on the monitor screen from MIN(–50) to MAX(+50). The factory value is 00.
- 8 Press ENT. The menu returns to the PIC SIZE menu.

Adjusting the Picture Position

- 1 In the PIC SIZE menu, press $\uparrow/\downarrow$ to move the cursor (►) to “H SHIFT” and press ENT. The following menu appears on the monitor screen.



- 2 Press $\uparrow/\downarrow$ to shift the picture.
 $\uparrow$: to shift the picture to the right
 $\downarrow$: to shift the picture to the left
The horizontal picture position is indicated on the monitor screen from MIN(–50) to MAX(+50). The factory value is 00.
- 3 Press ENT. The menu returns to the PIC SIZE menu.

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Resizing and Positioning the Picture

- 4 Press **↑/↓** to move the cursor (▶) to “V SHIFT” and press ENT.
The following menu appears on the monitor screen.

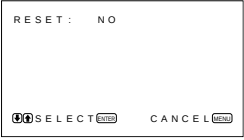


- 5 Press **↑/↓** to shift the picture.
↑: to shift the picture upward
↓: to shift the picture downward
The vertical picture position is indicated on the monitor screen from MIN(−50) to MAX(+50).
The factory value is 00.

- 6 Press ENT.
The menu returns to the PIC SIZE menu.

Restoring the Original Picture Size and Position

- 1 In the PIC SIZE menu, press **↑/↓** to move the cursor (▶) to “RESET” and press ENT.
The following menu appears on the monitor screen.



- 2 Press **↑/↓**.
“NO” changes to “YES”.



- 3 Press ENT.
The original picture size and position are restored.

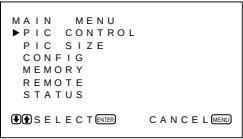
To cancel the reset function, press the MENU button before pressing the ENT button.

Using the Memory

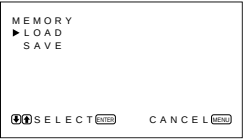
You can save the current picture condition by each input signal using MEMORY function.
The saved condition can be restored whenever necessary.
The items in PIC CONTROL, PIC SIZE and CONFIG (only for ENHANCE and H FILTER) menus can be memorized.
You can save the picture condition of up to five input signals.

Storing the Current Condition

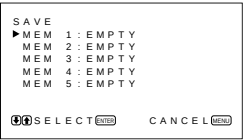
- 1 Press MENU.
The main menu appears on the monitor screen.



- 2 Press **↑/↓** to move the cursor (▶) to “MEMORY” and press ENT.
The MEMORY menu appears on the monitor screen.



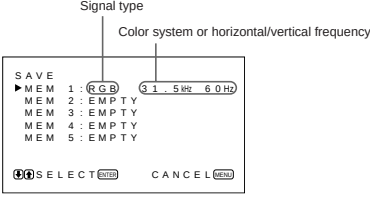
- 3 Press **↑/↓** to move the cursor (▶) to “SAVE” and press ENT.
The following menu appears on the monitor screen.



- 4 Press **↑/↓** to move the cursor (▶) to MEM 1 to 5 and press ENT.

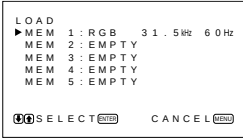
Using the Memory

“COMPLETED” message appears for about five seconds.
The current data is stored under the selected memory number.
If any data has been stored in the selected memory number, the signal type and the color system or horizontal frequency/vertical frequency are now displayed on the right column next to the selected memory number.



Calling Up the Stored Condition

- 1 In the MEMORY menu, press **↑/↓** to move the cursor (▶) to “LOAD” and press ENT.
The following menu appears on the monitor screen.



- 2 Press **↑/↓** to move the cursor (▶) to MEM 1 to 5 and press ENT.
“COMPLETED” message appears for about five seconds.
The picture is adjusted to the selected condition.

Notes

- You cannot recall the memory data if the selected signal is different from the preset signal.
- The following items can be memorized:

PIC CONTROL menu

- CONTRAST
- BRIGHTNESS
- CHROMA
- PHASE
- COLOR TEMP
- PICTURE AGC

PIC SIZE menu

- H SIZE
- H SHIFT
- V SIZE
- V SHIFT
- ASPECT

CONFIG menu

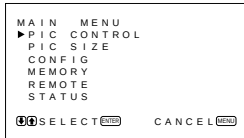
- ENHANCE
- H FILTER

Selecting the On-screen Language

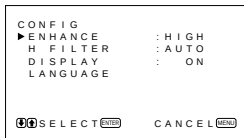
You can select the on-screen language among five languages.

Available languages are: English, German, French, Italian and Spanish.

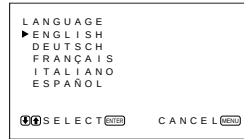
- Press MENU.
The main menu appears on the monitor screen.



- Press $\uparrow/\downarrow$ to move the cursor (►) to "CONFIG" and press ENT.
The CONFIG menu appears on the monitor screen.



- Press $\uparrow/\downarrow$ to move the cursor (►) to "LANGUAGE" and press ENT.
The following menu appears on the monitor screen.



- Press $\uparrow/\downarrow$ to move the cursor (►) to desired language and press ENT.
The on-screen language is switched to the one you selected.
ENGLISH: English
DEUTSCH: German
FRANÇAIS: French
ITALIANO: Italian
ESPAÑOL: Spanish

- Press MENU.
The menu returns to the CONFIG menu.

Self-diagnosis Function

The unit has a self-diagnosis function.

This function displays the monitor's condition with the $\odot$ indicator flashing and numbers on the SERVICE CODE indicator. The numbers inform you of the monitor's current condition. When the unit is working properly, only the dot at the lower-right position on the SERVICE CODE indicator flashes.

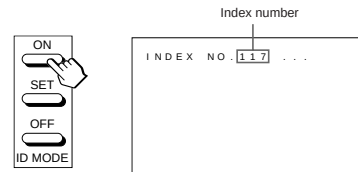
If the $\odot$ indicator flashes, check the number and contact your authorized Sony dealer.

- Check the two-digit number on the SERVICE CODE indicator.
The indicator shows one number, or multiple numbers alternately every a half second.
- Unplug the unit.
Inform the number to your authorized Sony dealer.

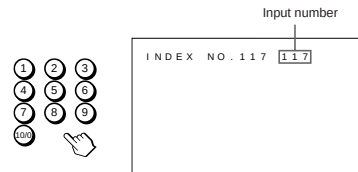
Operating a Specific Monitor with the Remote Commander

Using the supplied Remote Commander, you can operate a specific monitor without affecting other monitors that are installed together.

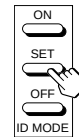
- Press ID MODE ON on the Remote Commander.
Monitor index numbers appear in white characters on all the monitors. (Every monitor is allocated an individual preset index number from 1 to 255.)
See "To change the index number" in the column to the right on this page to change the index number.



- Input the index number of the monitor you want to operate using 0–9 buttons on the Remote Commander.
The input number appears right next to each monitor's own index number.

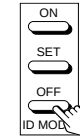


- Press ID MODE SET.
The character on the selected monitor changes to cyan while others change to red.



You can operate only a specified monitor. (All operations are available in ID mode except POWER ON/OFF.)

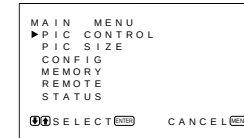
- After necessary adjustment, press ID MODE OFF.
The monitor returns to the normal mode.



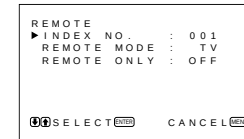
To change the index number

You can change the index number if necessary. When you change the number, use the buttons on the monitor.

- Press MENU.
The main menu appears on the monitor screen.



- Press $\uparrow/\downarrow$ to move the cursor (►) to "REMOTE" and press ENT.
The REMOTE menu appears on the monitor screen.



- Press $\uparrow/\downarrow$ to move the cursor (►) to "INDEX NO." and press ENT.
The following menu appears on the monitor screen.



- Select the index number with $\uparrow/\downarrow$ and press ENT.
The menu returns to the REMOTE menu.

Using the Other Remote Commander

- The following operations can be controlled.
- Power on/off
 - Input selection
 - Menu operations
 - Picture adjustments: contrast, phase and chroma
 - On-screen display on/off (only for video monitors and TVs)

The available operations and the buttons to be used for each operation are limited depending on each Remote Commander. See the table below.

Remote Commander model		RM-854	RM-1271	RM-PJ1292	RM-PJ1000
REMOTE MODE setting		TV	PJ	PJ	PJ
Input selection	RGB1	RGB	A	A	A
	RGB2	—	B	B	B
	LINE	LINE1	VIDEO	VIDEO	VIDEO
Menu operation	MENU	MENU	PAGE or ◀	PAGE or ◀	MENU or ◀
	ENTER	ENTER	➡	➡	ENTER or ➡
	+	+	⬆	⬆	⬆
Picture adjustment	Contrast	CONTRAST+/-	CONTR+/-	CONTR+/-	CONTR+/-
	Chroma	CHROMA+/-	COLOR+/-	COLOR+/-	COLOR+/-
	Phase	PHASE+/-	HUE+/-	HUE+/-	HUE+/-
On-screen information		DISPLAY	—	STATUS ON	STATUS ON

Specifications

Video processing

Capture range	Horizontal rate: 15.6 to 80 kHz Vertical rate: 48 to 120 Hz
Preset signal	Input: 12 formats (See page 21 (GB))
Video memory	1,152 × 1,152 × 24 bits (RGB total)
Sampling rate	14.3 to 50 MHz offset phase max. (equivalent to 100 MHz sampling)
Panel system	AC-type Plasma Display Panel
Display resolution	1024 dots × 1024 lines
Pixel pitch	0.90 (horizontal) × 0.51 (vertical) mm (1/16 × 1/32 inches)
Picture size	921 (horizontal) × 522 (vertical) mm (36 3/8 × 20 3/8 inches)
Panel size	42-inch (diagonal 1,058 mm)

Inputs and Outputs

RGB1	
R (R-Y)/ G (Y)/B (B-Y) IN	BNC-type (×3) 0.714 Vp-p/non-composite 75-ohm (automatic termination) 1 Vp-p/composite 75-ohm (automatic termination)
SYNC IN(HD/COMP, VD)	BNC-type (×2) H (or composite) SYNC, V SYNC, 1 to 5 Vp-p high impedance
AUDIO IN (L, R)	Phono jack (×2) 500 mVrms, high impedance
RGB2	
R (R-Y)/ G (Y)/B (B-Y) OUT	BNC-type (×3) Loop-through
SYNC OUT (HD/COMP, VD)	BNC-type (×2) Loop-through H (or composite) SYNC, V SYNC
AUDIO OUT (L, R)	Phono jack (×2) Loop-through
RGB2	
RGB IN	D-sub 15-pin See “Pin assignment” on page 30 (GB).
AUDIO IN (L, R)	Phono jack (×2) 500 mVrms, high impedance

LINE (NTSC, PAL)

VIDEO IN	BNC-type (×1) Composite video, 1 Vp-p ±2 dB sync negative, 75-ohm (automatic termination)
Y/C IN	Mini DIN 4-pin type (×1) Y (luminance): 1 Vp-p ±2 dB sync negative, 75-ohm (automatic termination) C (chrominance): Burst 0.286 Vp-p ±2 dB (NTSC), 75-ohm (automatic termination) Burst 0.3 Vp-p ±2 dB (PAL) 75-ohm (automatic termination)
AUDIO IN (L, R)	Phono jack (×2) 500 mVrms, high impedance
VIDEO OUT	BNC-type (×1) Loop-through
Y/C OUT	Mini DIN 4-pin type (×1) Loop-through
AUDIO OUT (L, R)	(Variable output) Phono jack (×2) Loop-through
MONITOR OUT AUDIO (L, R)	
Phono jack (×2) Maximum 500 mVrms, high impedance	
CONTROL S (IN, OUT)	
Mini jack (stereo) (×2) 5 Vp-p	
REMOTE (RS-232C)	
Mini DIN 8-pin (×1)	
SPEAKERS	
6 to 16 ohms, 7 W + 7 W (when the impedance is 8 ohms)	

General

Power requirements	
100 to 120 V AC, 50/60 Hz, 4.7 A/410 W 220 to 240 V AC, 50/60 Hz, 2.2 A/400 W	
Operating conditions	
Temperature: 0°C to 35°C (32°F to 95°F) Humidity: 20% to 90% (no condensation) Atmospheric pressure: 700 to 1060 hPa	

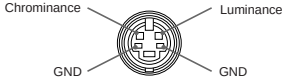
Specifications

- Storing/transporting conditions
- Temperature: -10°C to +40°C
(14°F to 104°F)
Humidity: 20% to 90% (no condensation)
Atmospheric pressure: 700 to 1060 hPa
- Dimensions
- 1036 × 636 × 152 mm
(40 7⁄8 × 25 1⁄8 × 6 1⁄8 inches) (w/h/d)
- Mass
- 45 kg (99 lb 3 oz)
- Supplied accessories
- AC power cord (1)
AC plug holder (1)
Remote Commander RM-921 (1)
Size AA (R6) batteries (2)
Ferrite core (2)
Foot support bracket (2)
Screws for foot support bracket (6)
Monitor stabilizer (2)
Operating instructions (1)

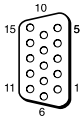
Design and specifications are subject to change without notice.

Pin assignment

Y/C jack (Mini DIN 4-pin)



RGB IN connector (D-sub 15-pin)



Pin No.	Signal
1	Red video or R-Y
2	Green video or Y
3	Blue video or B-Y
4	Ground
5	Ground
6	Red ground
7	Green ground
8	Blue ground
9	Not used
10	Ground
11	Ground
12	SDA
13	H sync or composite sync
14	V sync
15	SCL

SONY®

3-864-657-03(1)

Mounting Bracket

Operating Instructions

Mode d'emploi

Bedienungsanleitung

Manual de instrucciones

Istruzioni per l'uso

取扱説明書

お買い上げいただきありがとうございます。



警告

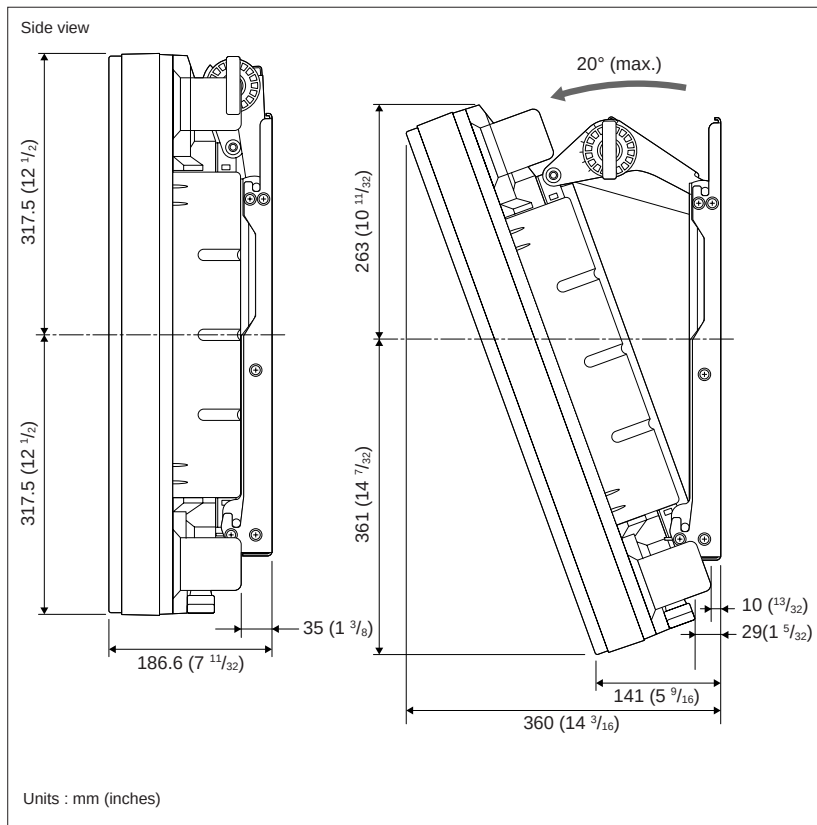
安全のための注意事項を守らないと、
火災や人身事故になることがあります。

この取扱説明書には事故を防ぐための重要な注意事項と製品の取り扱いかたを示してあります。**この取扱説明書をよくお読みのうえ**、製品を安全にお使いください。お読みになったあとは、いつでも見られるところに必ず保管してください。

MB-514

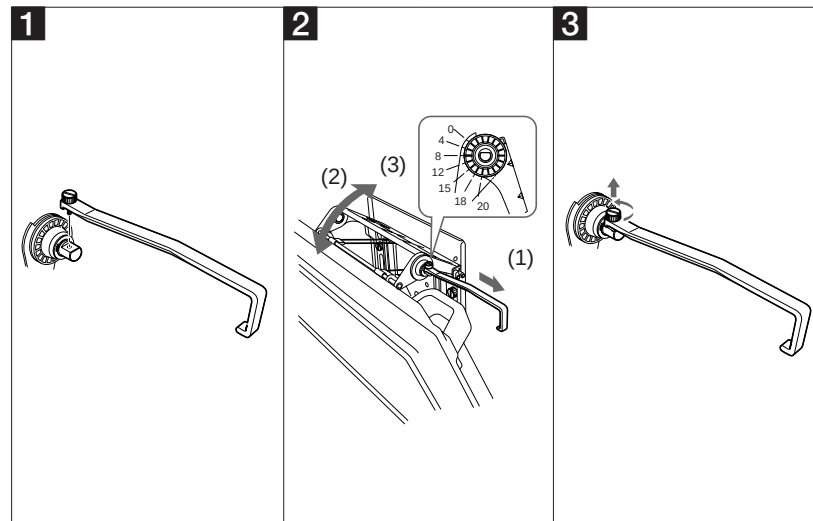
© 1998 by Sony Corporation Printed in Japan

Dimensions of the assembled bracket



Design and specifications are subject to change without notice.

Changing the Angle of the Monitor



English

You can change the angle of the monitor panel by adjusting the angle of the mounting bracket.

Note

If you have any questions about installing the mounting bracket, contact your authorized Sony dealer.

- 1** Attach the handle on the mounting bracket with the supplied screw (provided with the handle).
- 2** Adjust the monitor panel angle.
You can change the angle from 0° to 20° (7 levels).
(Approx. 0°, 4°, 8°, 12°, 15°, 18° and 20°)
(1) Pull the handle down to unsnap the lock.
(2) Push the panel to the desired angle.
(3) Let go of the handle and adjust the panel angle so it can be locked.

See the angle marks.

- 3** Remove the handle.

Store the handle with the Operating Instructions.

SONY®

3-864-658-04(1)

1-3. MB-514 Installation Manual

Mounting Bracket

Installation Manual for Dealers

特約店様用設置説明書

お買い上げいただきありがとうございます。

お客様へ



この設置説明書は特約店様用に書かれたものです。

お客様が設置説明書に記載された設置工事を行うと、事故などにより死亡や大けがにつながる場合があります。**お客様自身では絶対に設置工事をしないでください。**設置については必ずお買い上げ店またはソニーのサービス窓口にご依頼ください。

特約店の方は、取り付けを安全に行うために、必ずこの設置説明書をよくお読みください。

MB-514

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WARNING

Install the monitor on a wall that can hold a weight of at least 400kg (881lb14 oz). Reinforce the wall, if needed.

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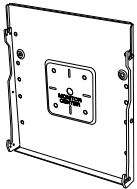
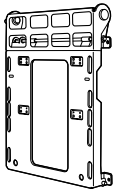
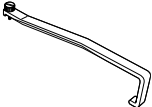
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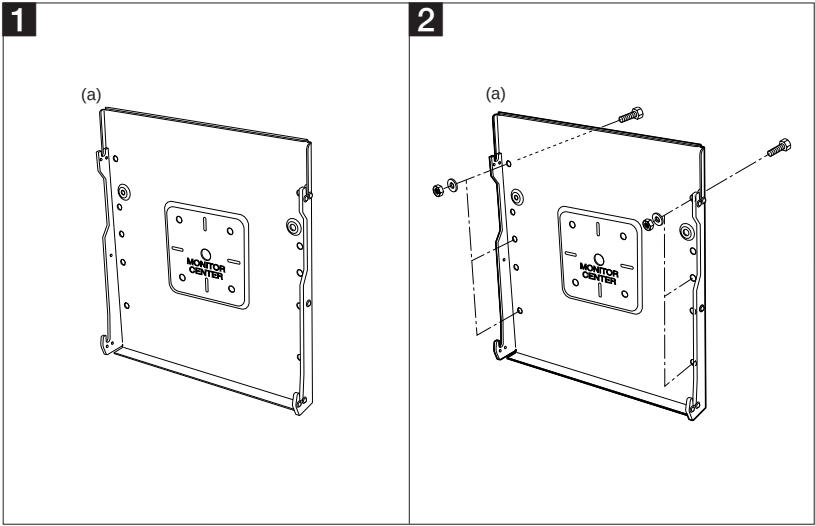
Overview

The mounting bracket MB-514 is designed to install the Sony flat panel monitor on a wall.

Parts List

(a)	Wall bracket (1)	
(b)	Mounting bracket (1)	
(c)	Handle (1)	
(d)	Knob (2)	
(e)	Screw M5 (8)	

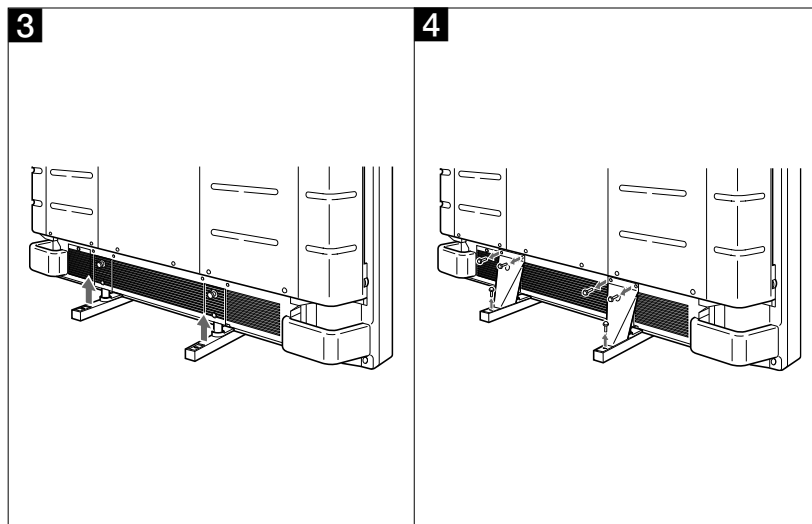
Installation



English

- 1 Decide where on the wall you want to install the wall bracket (a).
The center hole of the wall bracket will be matched the center of the monitor panel.
- 2 Install the wall bracket (a) on the wall.
Use six M8 bolts or concrete anchors, six nuts and six washers (not supplied).

Installation

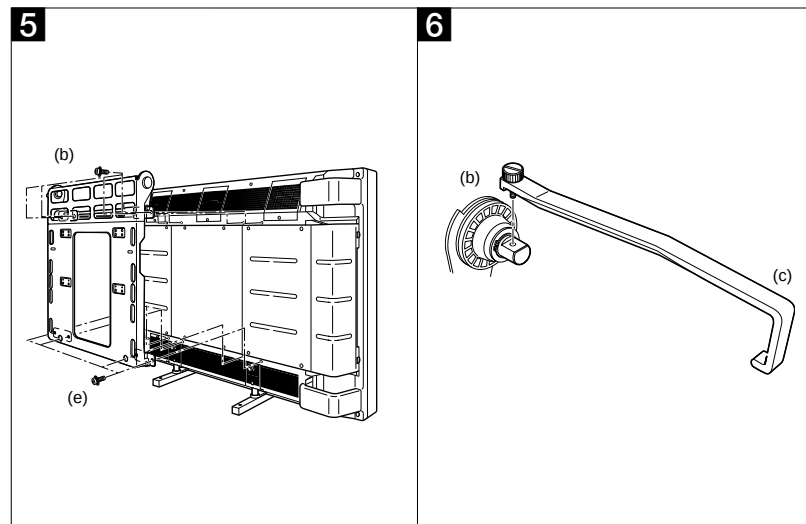


English

- 3** Pull down the retractable feet and stand the monitor up.
For details on using the retractable feet, see the Operating Instructions for the Sony flat panel monitor.

If the retractable feet and the foot support brackets are already installed on the monitor, go to Step 4. Otherwise, go to Step 5.

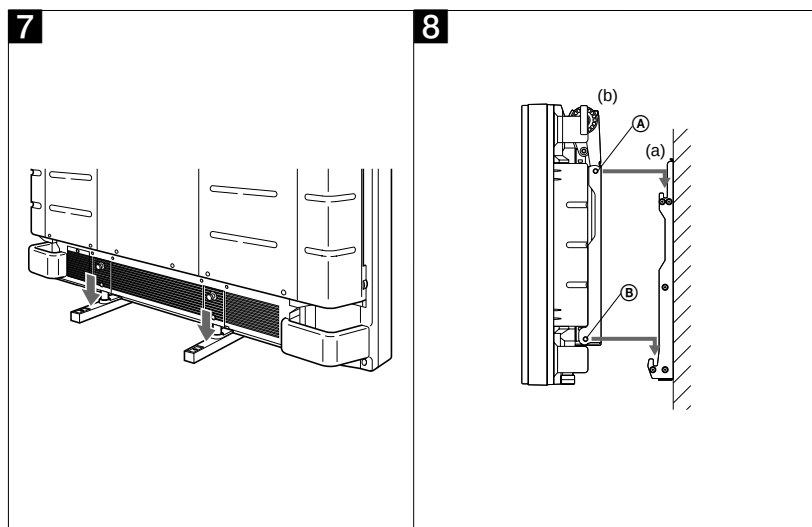
- 4** Remove the foot support brackets from the retractable feet.
For details on removing the foot support brackets, see the Operating Instructions for the Sony flat panel monitor.



English

- 5** Install the mounting bracket (b) on the flat monitor. Match the mounting bracket screw holes to the monitor screw holes, then insert and tighten eight M5 screws (e) to lock the bracket onto the monitor.

- 6** Attach the handle (c) on the mounting bracket (b) with the supplied screw (provided with the handle).



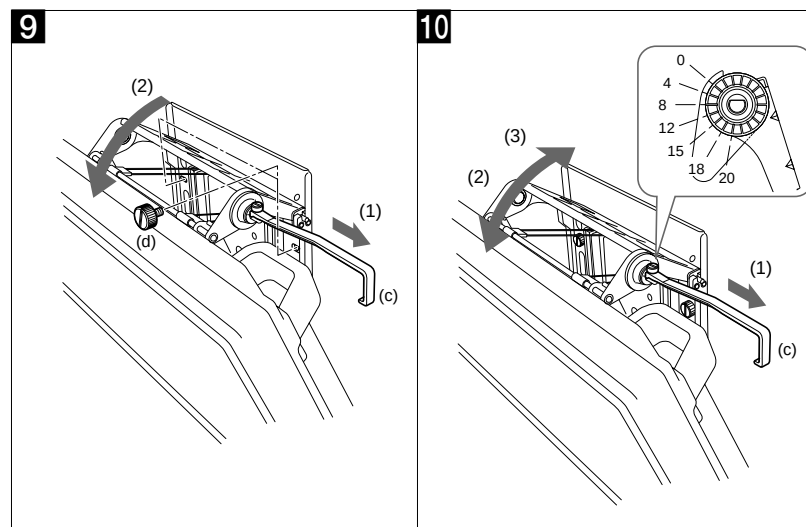
English

- 7** Store the retractable feet.
For details on using the retractable feet, see the Operating Instructions for the Sony flat panel monitor.
- 8** Install the flat monitor with the mounting bracket (b) on the wall bracket (a).
Hook two mounting bracket shafts (A), (B) on the wall bracket grooves.

Note

Make sure that the shafts hook properly into the grooves.

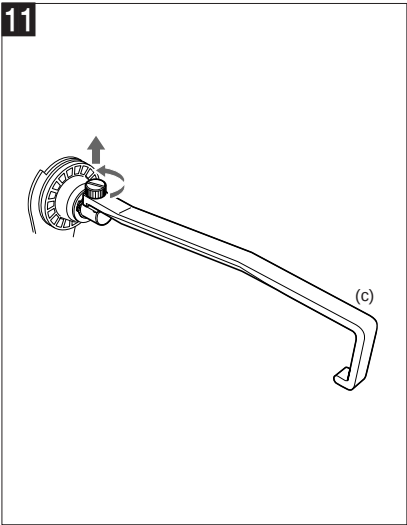
Installation



English

- 9** Lock the mounting bracket shafts (hooked in Step 8) by turning two knobs (d) so that the shafts do not move vertically.
Pull the handle (c) out (installed in Step 6) and unsnap the lock. Pull down the monitor panel so the mounting bracket angle is fully extended. Turn two knobs (d) and lock the monitor panel.
- 10** Adjust the monitor panel angle.
You can change the angle from 0° to 20° (7 levels). (Approx. 0°, 4°, 8°, 12°, 15°, 18° and 20°)
(1) Pull the handle (c) down to unsnap the lock.
(2) Push the panel to the desired angle.
(3) Let go of the handle and adjust the panel angle so it can be locked.

See the angle marks.

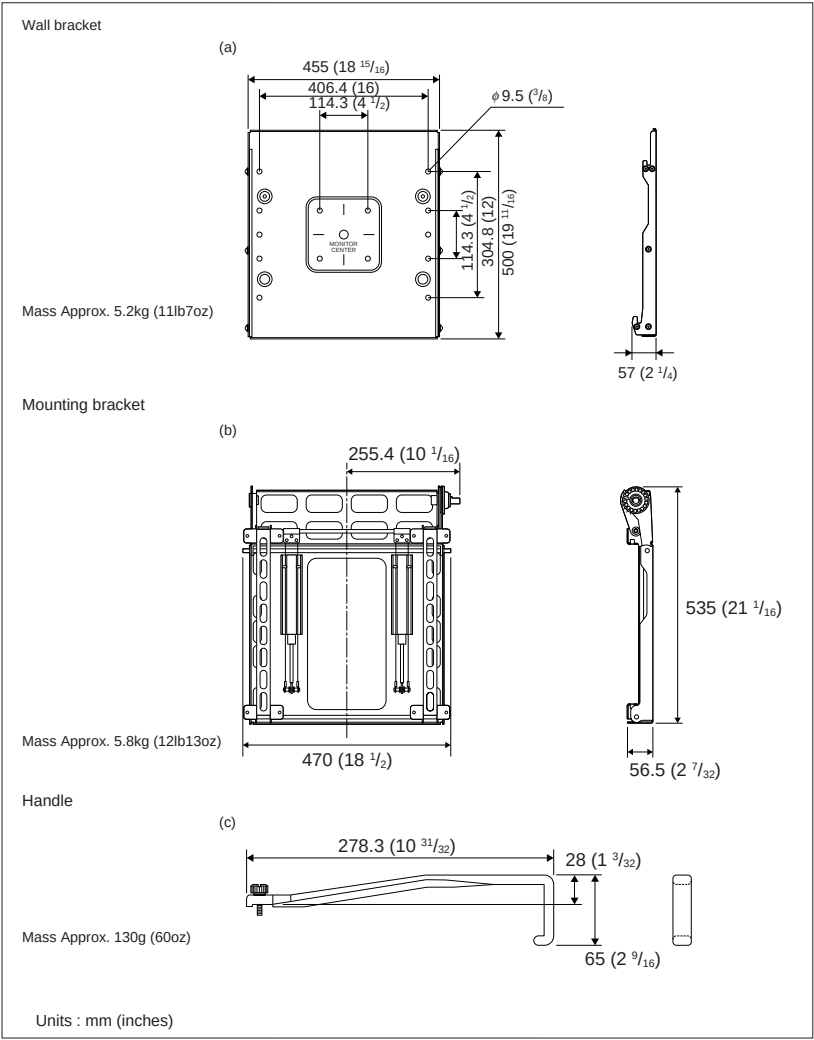


English

- 11** Loosen the screw and remove the handle.
Store the handle with the Operating Instructions.

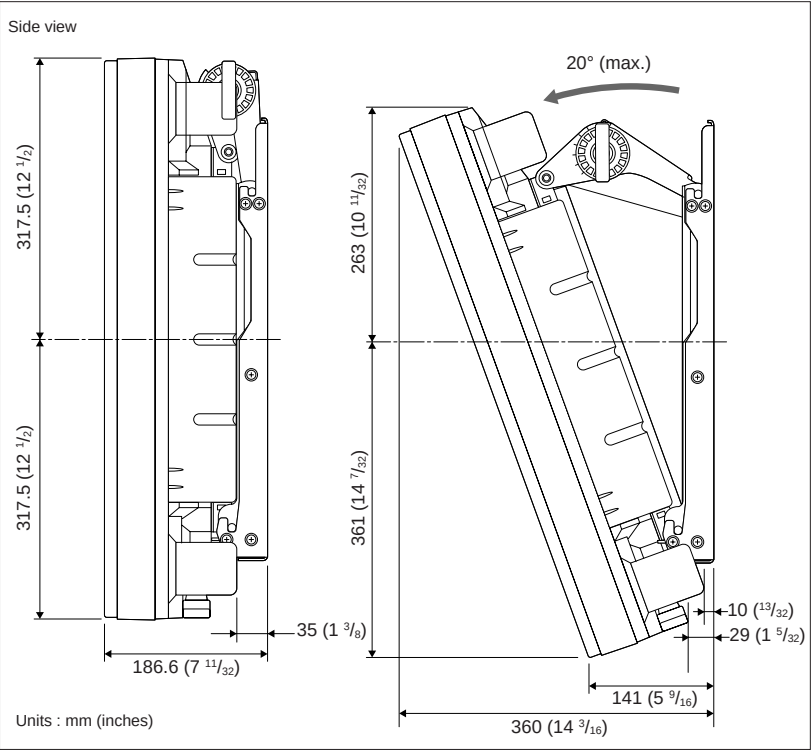
Specifications

Dimensions





Dimensions of the assembled bracket

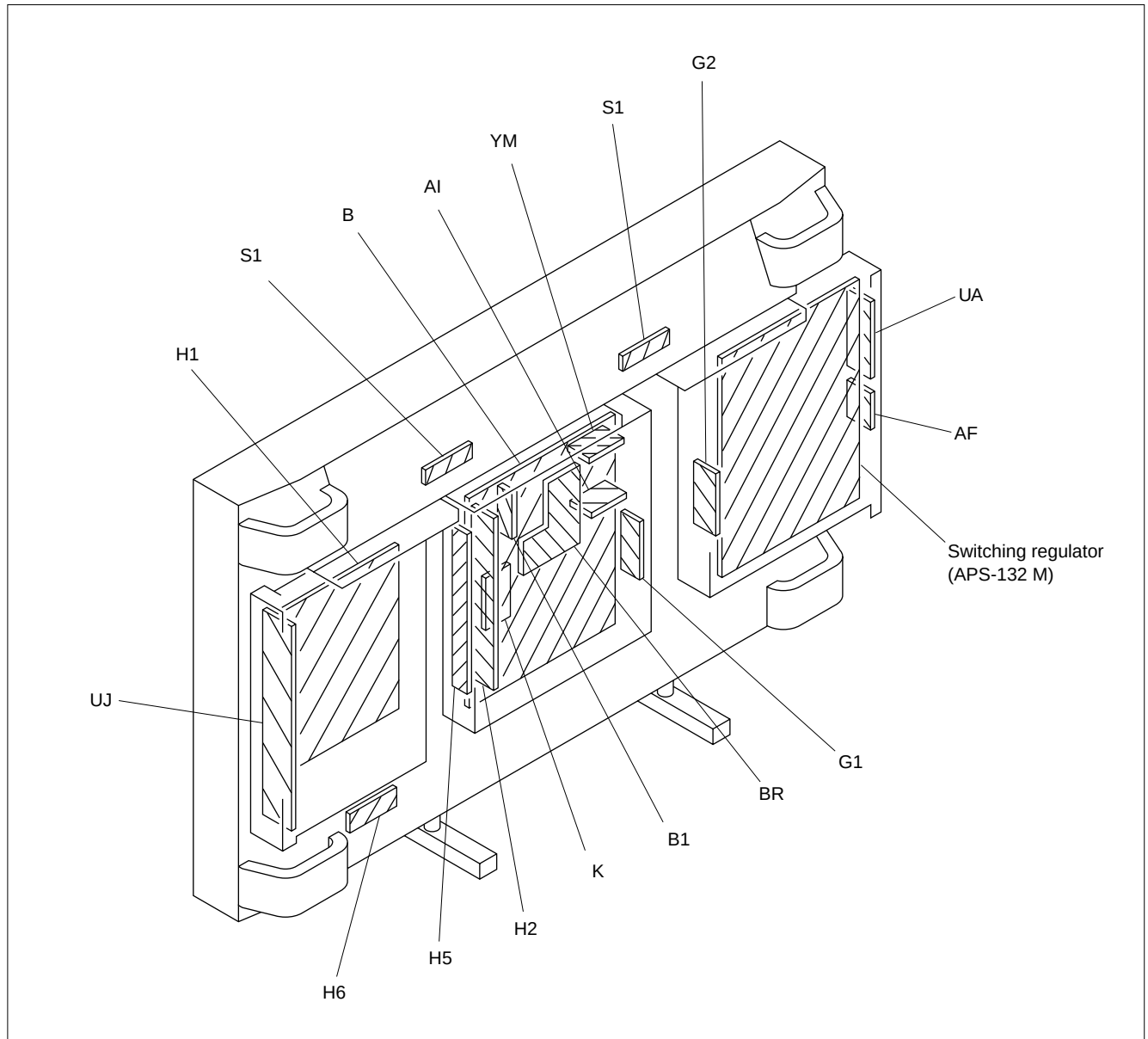


Design and specifications are subject to change without notice.

Section 2

Service Informations

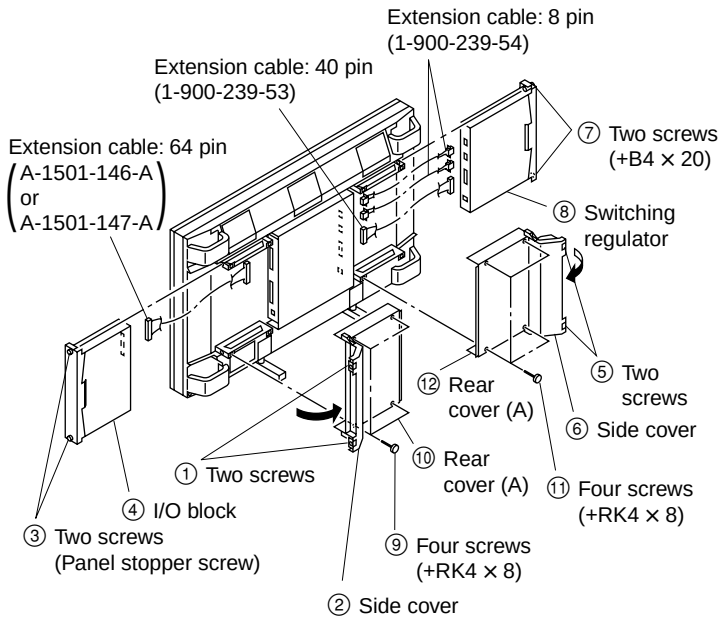
2-1. Circuit Boards Location



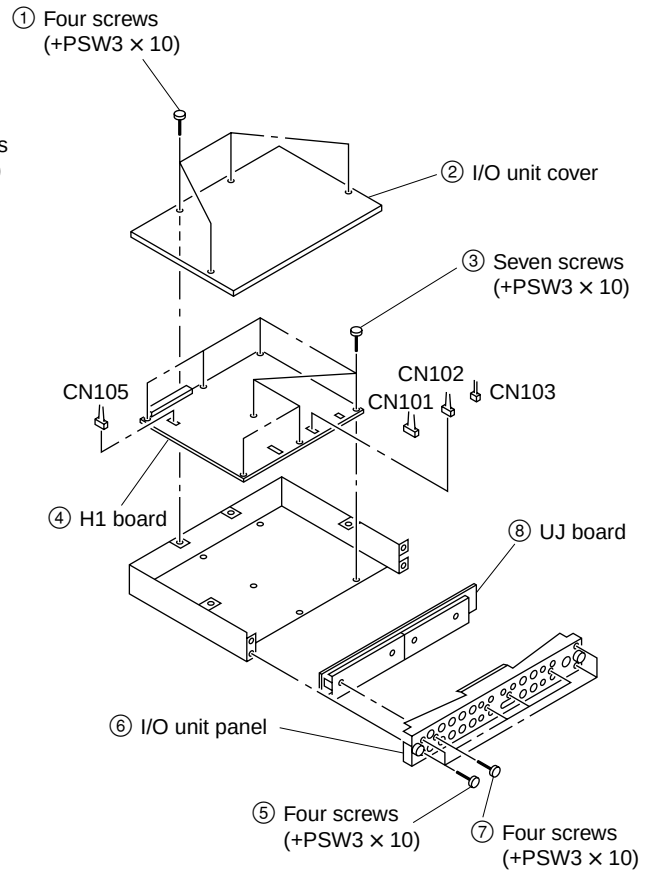
2-2. Disassembly

NOTE: When removing the switching regulator from the main unit, start performing more than 30 seconds after the main power is turned off.

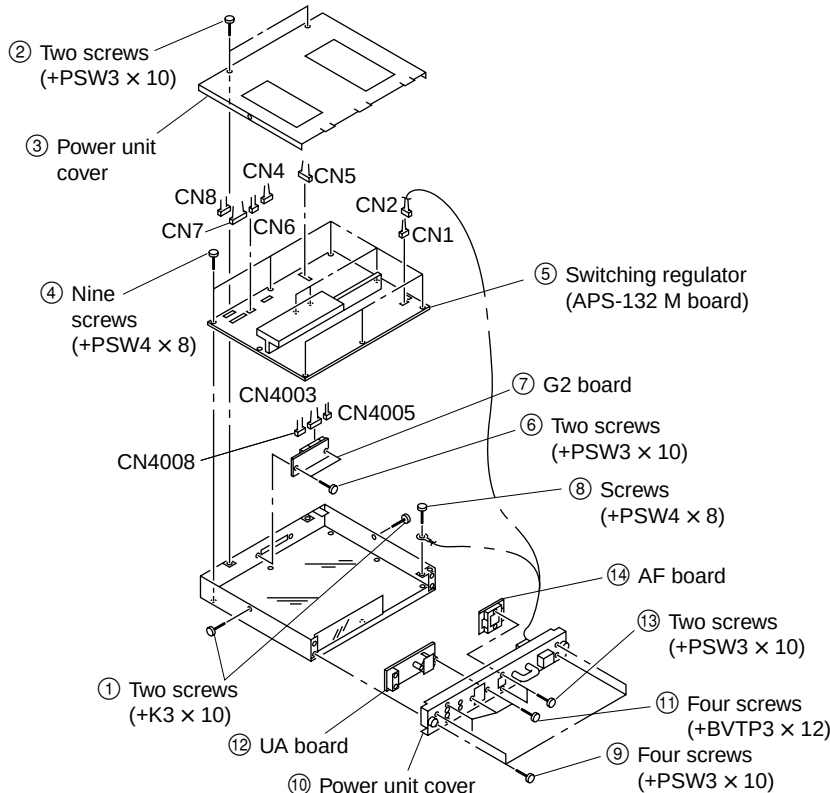
2-2-1. I/O and Switching Regulator Removal and Extension Cable Connection



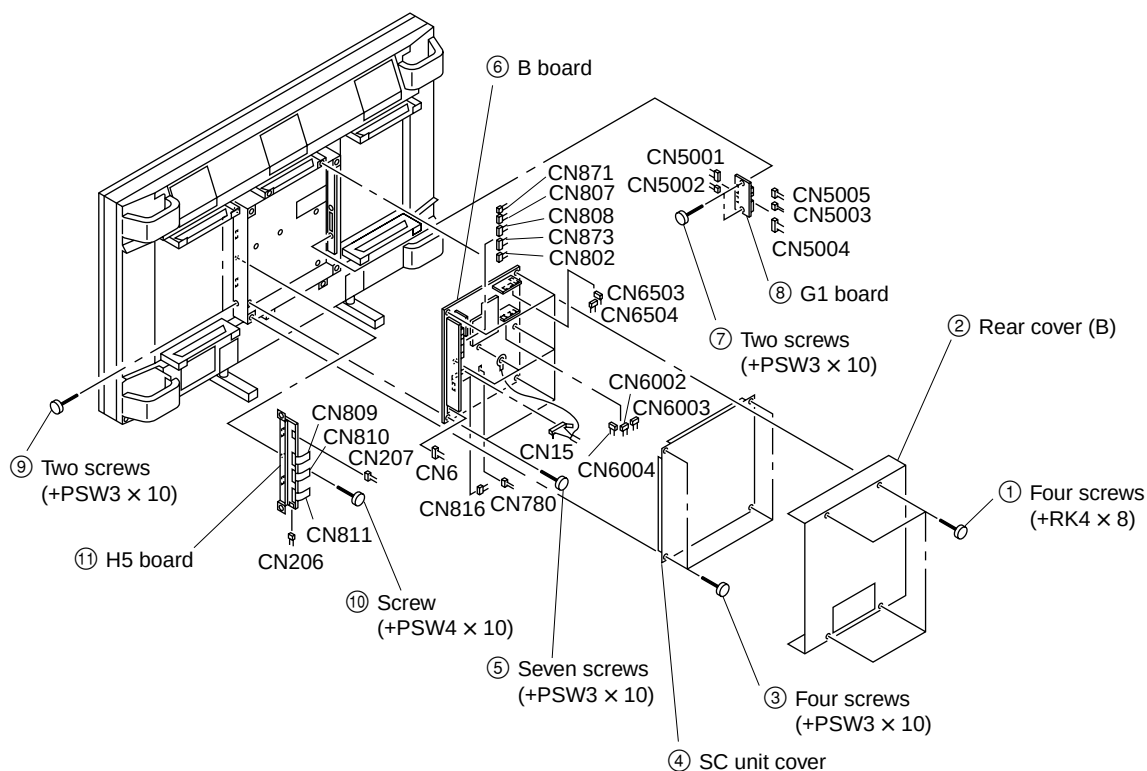
2-2-2. H1 and UJ Boards Removal



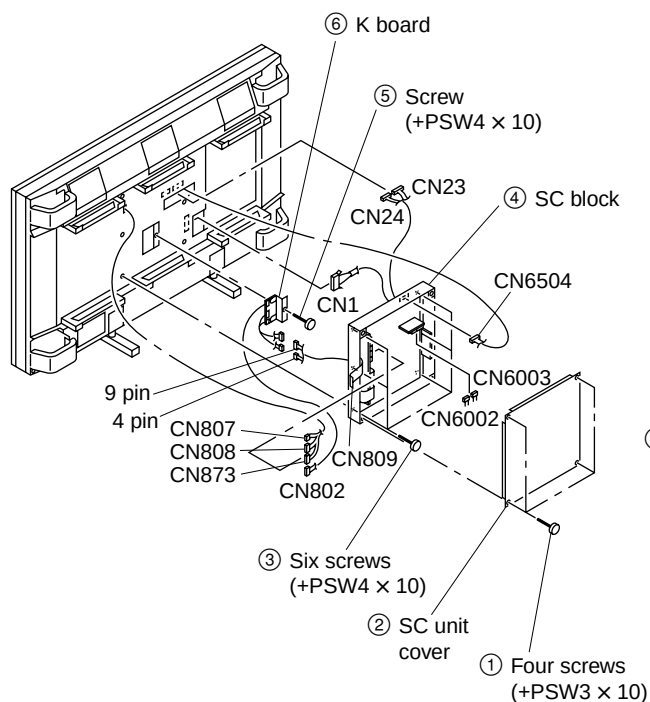
2-2-3. AF, G2, UA Boards and Switching Regulator (APS-132 M Board) Removal



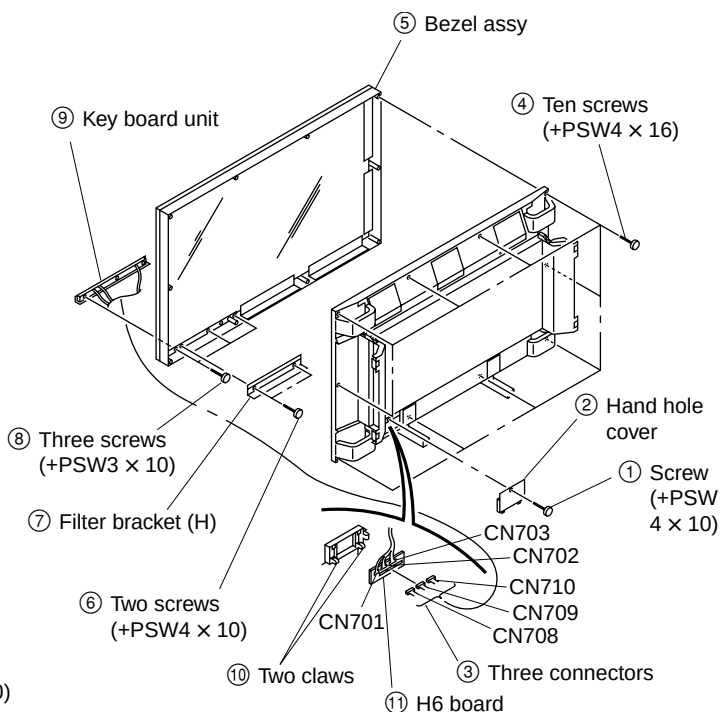
2-2-4. G1, H5 and B Boards Removal



2-2-5. K Board Removal

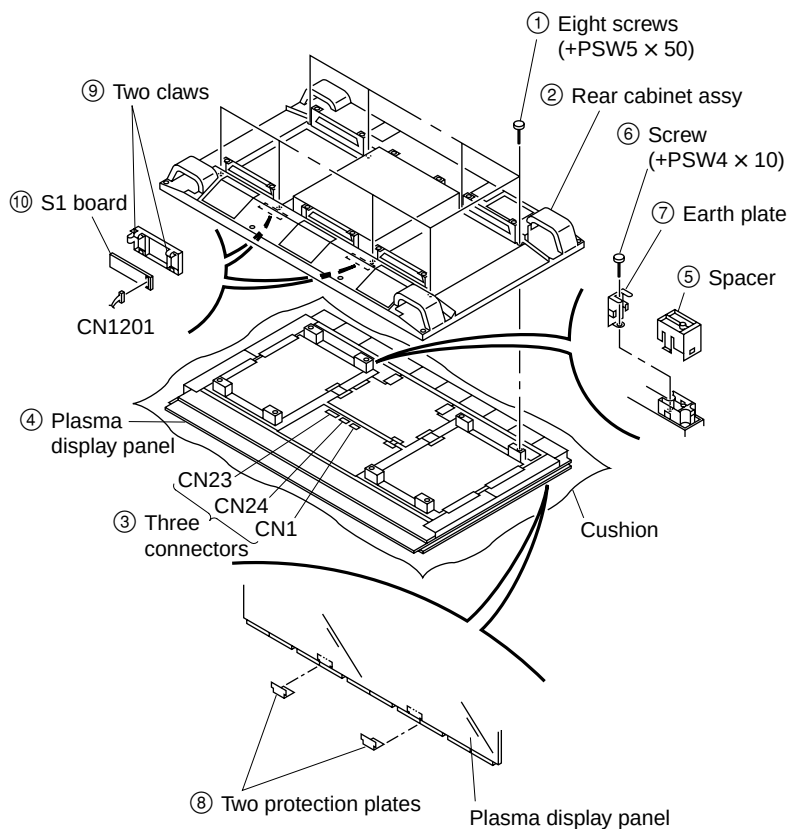


2-2-6. Bezel Assy and H6 Board Removal

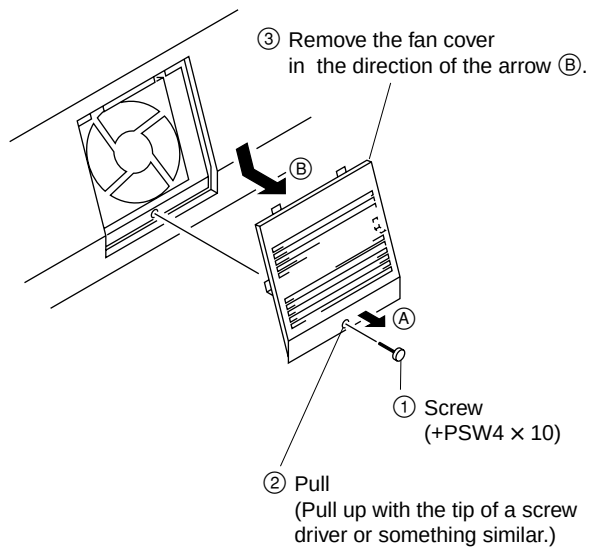


2-2-7. Plasma Display Panel and S1 Board Removal

- Remove the three connectors .
(CN1, 23, 24)
[Refer to 2-2-5. K Board Removal]



2-2-8. Fan Cover Removal



Section 3

Electrical Adjustments

3-1. Equipment Required

- Oscilloscope
Tektronix 2465 or equivalent
(band width: 350 MHz or more)
- VG (Programmable video signal generator)
VG814 or equivalent
- Frequency counter
Advantest TR5821AK or equivalent
- Digital voltmeter
Advantest TR6845 or equivalent
- Potential transformer
- Regulated DC power supply
- Remote commander (RM-921)

Note: Perform the following adjustments at least 5 minutes after turning on the power.

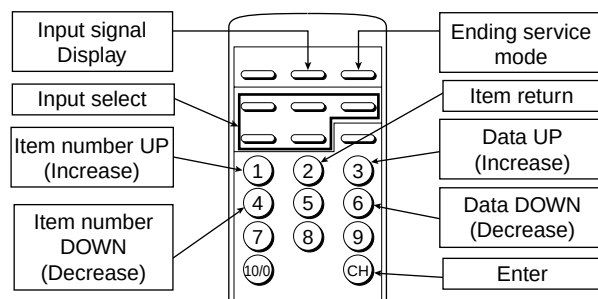
3-2. Electrical Adjustments in the Service Mode

Electric adjustment can be performed using the Remote Commander RM-921 attached to the set.
Adjustable items in the SERVICE mode are as follows.

MEMORY RESET Resets the EEPROM.
 PIC CONTROL Adjusts the level of analog signal circuits.
 W/B ADJUST Adjusts the gain of A/D converter and digital gamma circuit, and adjusts the sub bright.
 PIC SIZE Adjusts picture size.
 CONFIG Sets special functions.
 STATUS Checks internal status.

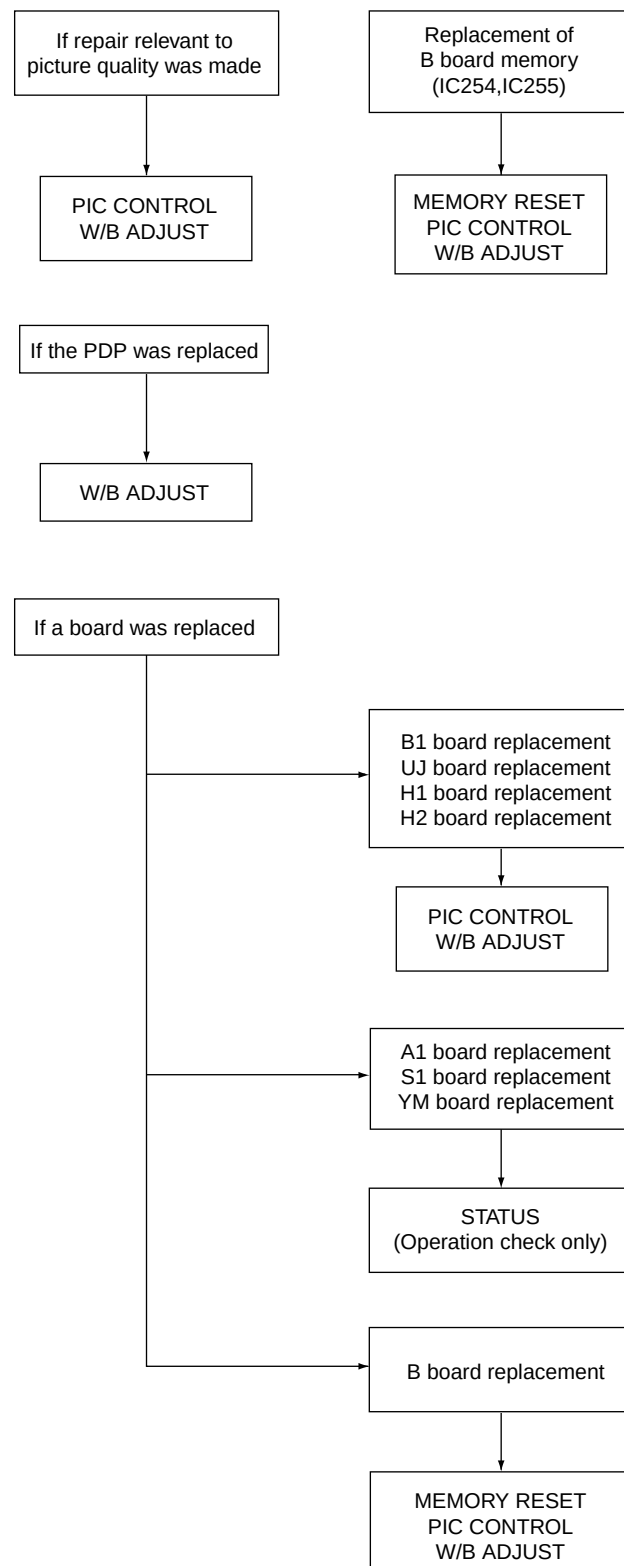
To enter the SERVICE mode, with the set in standby status, press **DISPLAY** → **5** → **VOL +** → **POWER** in this order.

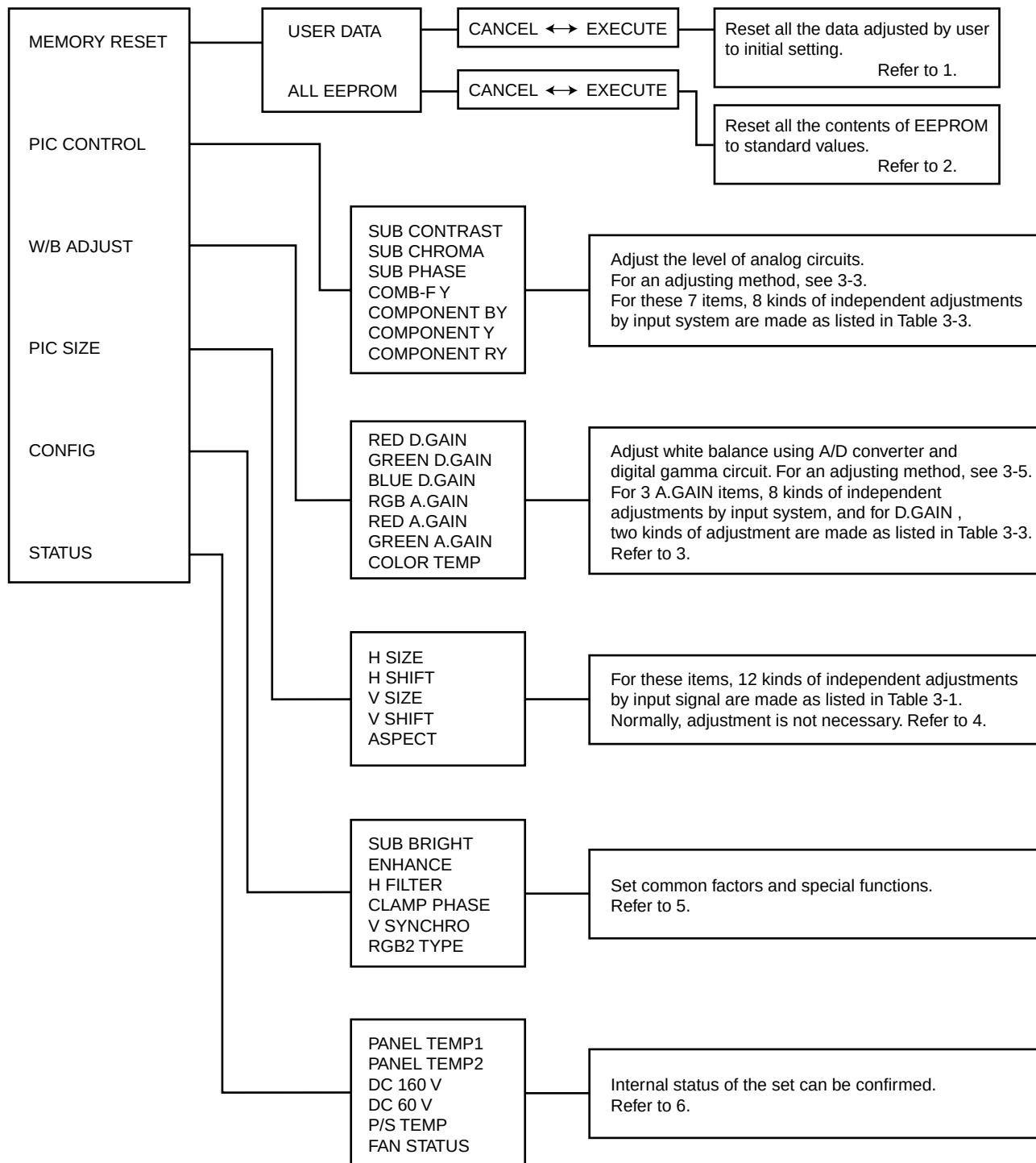
• Remote Commander functions in SERVICE mode



• Adjustment Required in Service Mode

Adjustment in the SERVICE mode is required if either of the following repairs was made.





1. USER DATA RESET (MEMORY RESET)

Items reset to initial setting, when executed.

CONTRAST	80	ASPECT	4 × 3
BRIGHTNESS	00		(16 × 9 for HDTV)
CHROMA	00	ENHANCE	HIGH
PHASE	00		(LOW for NTSC, PAL)
COLOR TEMP	HIGH	H FILTER	AUTO
H SIZE	00	DISPLAY	ON
H SHIFT	00	LANGUAGE	
V SIZE	00		ENGLISH
V SHIFT	00	REMOTE MODE	TV
		REMOTE ONLY	OFF

And, five kinds of user data of the MEMORY menu are all become empty.

2. ALL EEPROM RESET (MEMORY RESET)

All areas in EEPROM are reset to standard values saved in the system controller. Use this command when EEPROM was replaced.

Be careful when executing this command, because all data including service video data and service size data are rewritten.

3. W/B ADJUST

..... Read also “Precautions on Adjustment”
“RED D. GAIN”, “GREEN D. GAIN” and “BLUE D. GAIN” of digital gain adjustments can be set independently for COLOR TEMP “HIGH” and “LOW” respectively.

At the shipment, these have been set to D9300 in COLOR TEMP “HIGH” mode, and D6500 in “LOW” mode.

Also, the standard values when RESET is executed on the User Menu are determined depending on the COLOR TEMP setting.

4. PIC SIZE

..... Read also “Precautions on Adjustment”
Use this command when the picture size is to be adjusted.

This adjustment determines standard value in executing the reset of the user menu.

Even if the data are erased due to EEPROM replacement, execution of b) ALL EEPROM RESET allows 12 kinds of preset data saved in the system controller to be all copied, and therefore normally the adjustment is not necessary.

5. CONFIG

• SUB BRIGHT

Common adjusting factor. For details, see 3-4 “Sub Bright Adjustment”.

• ENHANCE/H FILTER

..... Read also “Precautions on Adjustment”

This adjustment determines standard value in executing the reset of the user menu.

Use this command when individual items are to be reset.

Even if the data are erased due to EEPROM replacement, execution of b) ALL EEPROM RESET allows 12 kinds of preset data saved in the system controller to be all copied, and therefore normally the resetting is not necessary.

• CLAMP PHASE

Set the video clamp position. If CLAMP PHASE is set to “B”, the video signals are clamped at the back porch. Also, if it is set to “F”, the video signals are clamped at the leading edge of sync signal.

Normally, set it to “B”.

• V SYNCHRO

This model is not used.

• RGB2 TYPE

Change setting from RGB to YUV, if mounting optional SDI.

Setting the RGB2 TYPE to “YUV” enables the input of YUV signals. In this case, input display of OSD is SDI.

Normally, select RGB.

Precautions on Adjustment

Preset data by input signal

COLOR TEMP

H SIZE

H SHIFT

V SIZE

V SHIFT

ASPECT

ENHANCE

H FILTER

These are related to the preset 12 kinds of signal timing (Table 3-1), and accordingly if no signal or unspecified signal is entered, "NOT ADJUSTABLE" is displayed at the top of screen, and at the same time, above 8 items are displayed in cyan. At this time, each data is the center value.

If either item is adjusted with unspecified signal input, the input signal timing is written to the MODE12 (ATI 1280 × 1024) area in Table 3-2.

Normally, do not make adjustment under "NOT ADJUSTABLE" condition.

The unspecified signal timing written to the MODE12 is reset to the initial setting by executing ALL EEPROM RESET.

6. STATUS

• PANEL TEMP1

The temperature data from thermal sensor mounted on the S1 board on the power supply block side (panel back side at top of set) is displayed in [°C]. Whether this temperature is faulty or not is given in "4-3. Trouble Codes List".

• PANEL TEMP2

The temperature data from thermal sensor mounted on the S1 board on the signal input terminal board block side (panel back side at top of set) is displayed in [°C].

Whether this temperature is faulty or not is given in "4-3. Trouble Codes List".

• DC 160 V

160 V DC voltage supplied to the PDP is displayed in [V].

Whether this voltage is faulty or not is given in "4-3. Trouble Codes List".

• DC 60 V

60 V DC voltage supplied to the PDP is displayed in [V].

Whether this voltage is faulty or not is given in "4-3. Trouble Codes List".

• P/S TEMP

The judged data from thermal sensor built in the power supply block is displayed. If normal, "OK" is displayed.

"NG" is displayed if a temperature rise of power supply block exceeds allowable value.

For the trouble of this temperature, see "4-3. Trouble Codes List".

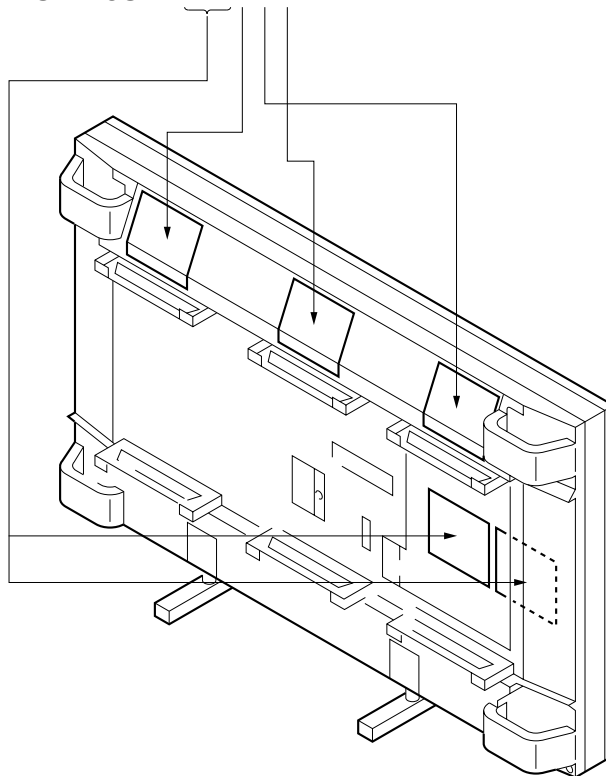
• FAN STATUS

Operating statuses of five cooling fans built in the set are displayed individually.

"L" is displayed if normal, or "H" if abnormal.

The relation between fan position and display is as shown below.

FAN STATUS : L L L L L



For the trouble of these fans, see "4-3. Trouble Codes List".

Table 3-1 Factory Preset Data

MODE	NAME	CLOCK (MHz)	H.FREQ (KHz)	V.FREQ (Hz)	EXT (H/V)	COMP VIDEO	COLOR TEMP	ASPECT	ENHANCE	H FILTER
1	NTSC	14.318	15.734	59.94		YES	HIGH	4 × 3	LOW	AUTO
2	PAL	17.75	15.625	50		YES	HIGH	4 × 3	LOW	AUTO
3	HDTV	37.125	33.75	59.94			HIGH	16 × 9	HIGH	AUTO
4	VGA	25.175	31.469	59.94	(-/-)		HIGH	4 × 3	HIGH	AUTO
5	VGA (TEXT)	28.332	31.469	70.111	(-/+)		HIGH	4 × 3	HIGH	AUTO
6	MAC13"	30.24	35	66.667	(-/-)		HIGH	4 × 3	HIGH	AUTO
7	MAC16"	57.285	49.727	74.553	(-/-)		HIGH	4 × 3	HIGH	AUTO
8	VESA 800 × 600	40	37.879	60.317	(+/+)		HIGH	4 × 3	HIGH	AUTO
9	VESA 1024 × 768	65	48.363	60.004	(-/-)		HIGH	4 × 3	HIGH	AUTO
10	ATI 1280 × 1024	110	63.953	59.94	(-/-)		HIGH	4 × 3	HIGH	AUTO
11	MAC21"	100	68.681	75.061	(-/-)		HIGH	4 × 3	HIGH	AUTO
12	ATI 1280 × 1024	135	79.976	75.025	(+/+)		HIGH	4 × 3	HIGH	AUTO

Table 3-2 Preset Timing

MODE	1		2		3		4		5		6		7		8		9		10		11		12	
NAME	NTSC		PAL		HDTV		VGA		VGA (TEXT)		MAC13"		MAC16"		VESA800 × 600		VESA1024 × 768		ATI1280 × 1024		MAC21"		ATI1280 × 1024	
RESOLUTION	753 × 483		923 × 573		960 × 1034		640 × 480		720 × 400		640 × 480		832 × 624		800 × 600		1024 × 768		1280 × 1024		1152 × 870		1280 × 1024	
CLOCK (MHz)	14.318		17.75		37.125		25.175		28.332		30.24		57.285		40		65		110		100		135	
HORIZONTAL																								
H. FREQ (KHz)	15.734		15.625		33.75		31.469		31.469		35		49.727		37.879		48.363		63.953		68.681		79.976	
	μ sec	dots	μ sec	dots	μ sec	dots	μ sec	dots	μ sec	dots	μ sec	dots	μ sec	dots	μ sec	dots	μ sec	dots	μ sec	dots	μ sec	dots	μ sec	dots
H. TOTAL	63.556	910	64	1136	29.63	1100	31.778	800	31.766	900	28.571	864	20.11	1152	26.4	1056	20.667	1344	15.64	1720	14.56	1456	12.504	1688
H. BLK	10.9	156	12	213	3.771	140	6.356	160	6.353	180	7.407	224	5.586	320	6.4	256	4.923	320	4	440	3.04	304	3.022	408
H. FP	1.5	22	1.5	26	0.593	22	0.636	16	0.635	18	2.116	64	0.559	32	1	40	0.369	24	0.727	80	0.32	32	0.119	16
H. SYNC	4.7	67	4.7	84	0.593	22	3.813	96	3.812	108	2.116	64	1.117	64	3.2	128	2.092	136	1.018	112	1.28	128	1.067	144
H. BP	4.7	67	5.8	103	2.586	96	1.907	48	1.906	54	3.175	96	3.91	224	2.2	88	2.462	160	2.255	248	1.44	144	1.837	248
H. ACTIVE	52.656	754	52	923	25.859	960	25.422	640	25.413	720	21.164	640	14.524	832	20	800	15.754	1024	11.64	1280	11.52	1152	9.481	1280
VERTICAL																								
V. FREQ (Hz)	59.94		50		59.94		59.94		70.111		66.667		74.553		60.317		60.004		59.94		75.061		75.025	
	m sec	lines	m sec	lines	m sec	lines	m sec	lines	m sec	lines	m sec	lines	m sec	lines	m sec	lines	m sec	lines	m sec	lines	m sec	lines	m sec	lines
V. TOTAL	16.683	262.5	20	312.5	16.667	562.5	16.683	525	14.263	449	15	525	13.413	667	16.579	628	16.666	806	16.688	1067	13.323	915	13.329	1066
V. BLK	1.303	20.5	1.632	25.5	1.348	45.5	1.43	45	1.557	49	1.286	45	0.865	43	0.739	28	0.786	38	0.673	43	0.655	45	0.525	42
V. FP	0.254	4	0.192	3	0.178	6	0.318	10	0.381	12	0.086	3	0.06	3	0.026	1	0.062	3	0.016	1	0.044	3	0.013	1
V. SYNC	0.191	3	0.16	2.5	0.148	5	0.064	2	0.064	2	0.086	3	0.06	3	0.106	4	0.124	6	0.078	5	0.044	3	0.038	3
V. BP	0.858	13.5	1.28	20	1.022	34.5	1.049	33	1.112	35	1.114	39	0.744	37	0.607	23	0.6	29	0.579	37	0.568	39	0.475	38
V. ACTIVE	15.381	242	18.368	287	15.319	517	15.253	480	12.706	400	13.714	480	12.549	624	15.84	600	15.88	768	16.015	1024	12.67	870	12.8	1024
SYNC																								
SOG					YES						YES													
EXT (H/V)							(-/-)		(-/+)		(-/-)		(-/-)		(+/+)		(-/-)		(-/-)		(-/-)		(+/+)	
COMP VIDEO	YES		YES																					
VIDEO LEVEL	0.714V		0.700V		0.714V		0.714V		0.714V		0.714V		0.714V		0.714V		0.714V		0.714V		0.714V		0.714V	
SYNC LEVEL	0.286V		0.300V		0.286V		TTL		TTL		0.286V		TTL		TTL		TTL		TTL		TTL		TTL	

3-3. Adjustment of Respective Signal Levels

3-3-1. RGB Level Adjustment

1. Make preparation for adjustment, input AC, input the gray scale (Including 100IRE) of the VGA graphic (640×480) to RGB1, and select RGB1 using a remote commander.
2. Observe the TP503 (B IN) using an oscilloscope, and adjust the RGB A.GAIN level using a remote commander so that the signal level will be $1.10 \text{ V} \pm 0.01 \text{ V p-p}$. (Fig. 3-1)
3. Observe the TP501 (R IN) using an oscilloscope, and adjust the RED A.GAIN level with a Remote commander so that the signal level will be $1.10 \text{ V} \pm 0.01 \text{ V p-p}$. (Fig. 3-1)
4. Observe the TP502 (G IN) using an oscilloscope, and adjust the GREEN A.GAIN level using a remote commander so that the signal level will be $1.10 \text{ V} \pm 0.01 \text{ V p-p}$. (Fig. 3-1)
5. Input the gray scale of the HIGH VISION (YPbPr) to the RGB1, and select the YUV mode using a remote commander.
6. Observe the TP503 (B IN) using an oscilloscope, and adjust the RGB A.GAIN level using a remote commander so that the signal level will be $1.10 \text{ V} \pm 0.01 \text{ V p-p}$. (Fig. 3-1)

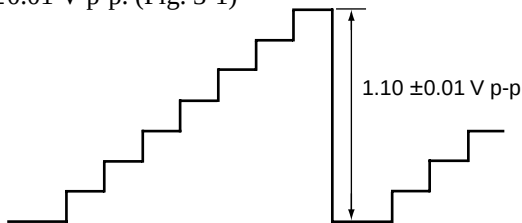


Fig. 3-1

3-3-2. YUV Level Adjustment

1. Input the YUV signal to the RGB1 Input terminal. The signal should be gray scale (NTSC).
2. Select the YUV mode using a remote commander to enter the adjustment mode.
3. Observe the TP2: BR board (G OUT) using an oscilloscope, and adjust the COMPONENT Y level so that the signal level will be $0.70 \text{ V} \pm 0.01 \text{ V p-p}$. (Fig. 3-2)

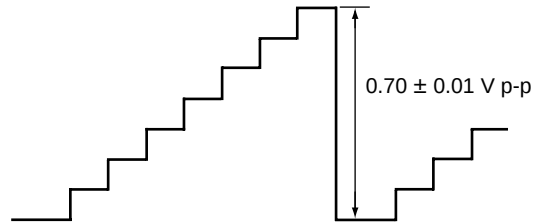


Fig. 3-2

4. Observe the TP503 (B IN) using an oscilloscope, and adjust the RGB A.GAIN level so that the signal level will be $1.10 \text{ V} \pm 0.01 \text{ V p-p}$. (Fig. 3-3)

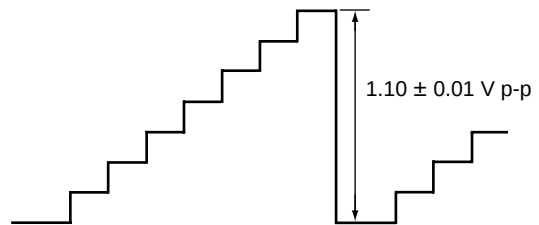


Fig. 3-3

5. Change the signal of 75 % color bar.
6. Adjust the COMPONENT B-Y so that the TP503 (B IN) level and the B level will be the same. (Fig. 3-4)

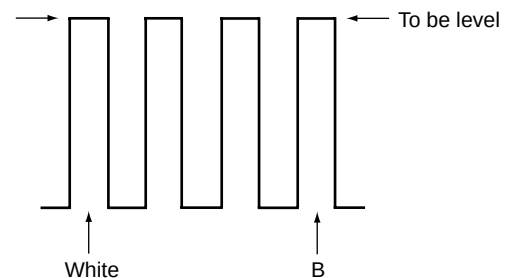


Fig. 3-4

- Adjust the COMPONENT R-Y so that the TP501 (R IN) level and the R level will be the same. (Fig. 3-5)

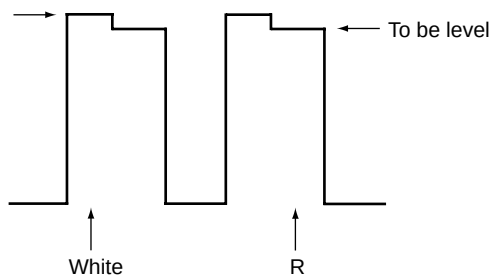


Fig. 3-5

- Ensure tracking between 6 and 7.
- Adjust the SUB PHASE so that all the signal levels of the TP503 (B IN) will be the same. (Fig. 3-6)
Standard level difference: Within 0.03 V

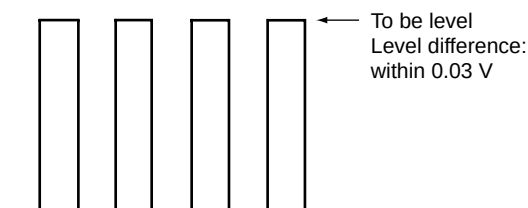


Fig. 3-6

- The levels are not the same, ensure tracking among 6, 7 and 9.
- Change the signal to the YUV of the PAL, and make the same adjustment as the NTSC.

Note: In the case of PAL, adjustment will be almost satisfactory when NTSC data are copied. So adjust only incorrect points after copying the data.

3-3-3. Y/C Level Adjustment

- Input the gray scale of the NTSC to the Y/C input.
- Select the Y/C with a Remote commander to enter the adjustment mode.
- Observe the TP2: BR board (G OUT) using an oscilloscope, and adjust the SUB CONTRAST so that the signal level will be $0.70 \text{ V} \pm 0.01 \text{ V p-p}$. (Fig. 3-7)

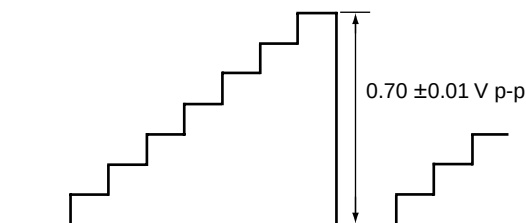


Fig. 3-7

- Input the RGB A. GAIN level that was adjusted by the YUV of NTSC to the RGB A. GAIN.
- Change the signal of 75 % color bar.
- Adjust the SUB CHROMA so that the TP503 (B IN) white level and the B level will be the same. (Fig. 3-8)

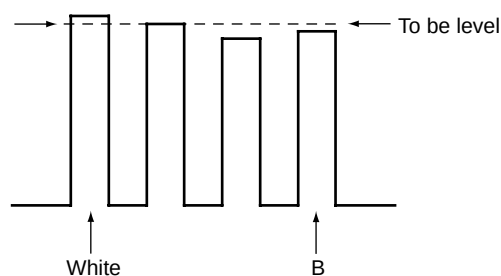


Fig. 3-8

- Adjust the SUB PHASE so that all output will be the same. (Fig. 3-9)
Standard: Within 0.03 V

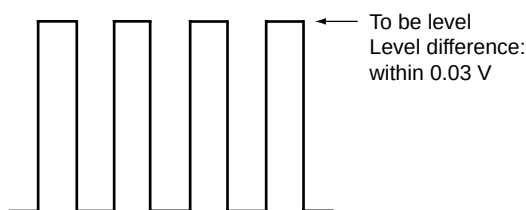


Fig. 3-9

- Ensure tracking between 6 and 7.
- Change the signal to the PAL and make the same adjustment as the case of the NTSC.

Note: In the case of the PAL, copy the NTSC data and then adjust incorrect points.

3-3-4. Adjustment of Composite Video Level

1. Input the gray scale of the NTSC to the line input, and enter the LINE input mode using a remote commander.
2. Enter the adjustment mode using a remote commander, and input the RGB A.GAIN level that was adjusted by the YUV of NTSC. Input the SUB CONTRAST value that was adjusted by the Y/C input to the SUB CONTRAST.
3. Observe the TP2: BR board (G OUT) using an oscilloscope, and adjust the COMB-F Y level so that the output level will be $0.70 \text{ V} \pm 0.01 \text{ V p-p}$. (Fig. 3-10)

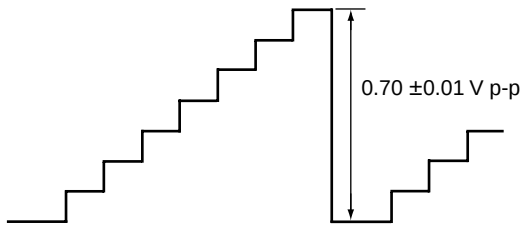


Fig. 3-10

4. Change the signal of 75% color bar, and adjust the SUB CHROMA so that the TP503 (B IN) white level and the B level will be the same. (Fig. 3-11)

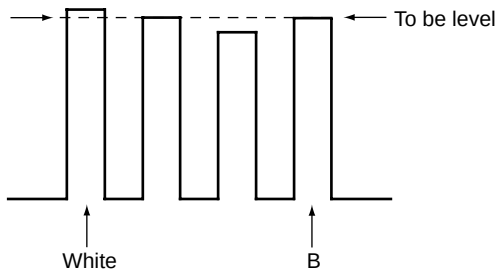


Fig. 3-11

5. Adjust the SUB PHASE so that all outputs will be the same. (Fig. 3-12)
Standard: Within 0.03 V

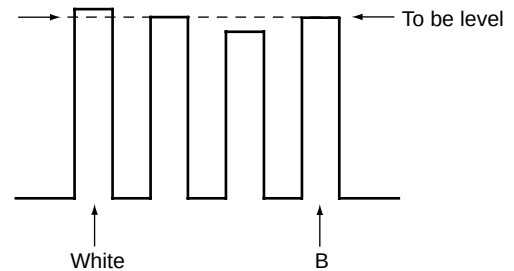


Fig. 3-12

6. Ensure tracking between 4 and 5.
7. Change the signal to the PAL and make the same adjustment as the case of the NTSC.

Note: In case of the PAL, adjustment will be almost satisfactory when NTSC data are copied. So adjust only incorrect points after copying the data.